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ARAB REPUBLIC OF EGYPT

EGYPT'S FOOD SUBSIDIES: BENEFIT INCIDENCE AND LEAKAGES

September 16, 2010

Social and Economic Development Group
Middle East and North Africa Region
The World Bank

Document of the World Bank

Currency Equivalents

(Exchange Rate as of September16, 2010)

Currency Unit	=	Egyptian Pound (LE)
LE 1	=	0.1756

US$ 1	=	5.693

Fiscal Year

July 1- June 30

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ACKNOWLEDGMENTS

This report was prepared by Sherine Al-Shawarby (Senior Economist, and Task Team Leader) and Dr Heba El-Laithy (Consultant MNSED and Professor in Cairo University). Ahmad Iman Youssef (Consultant) provided research assistance, and Iman Sadek (Team Assistant) provided administrative and desk-top publishing assistance.

The team wishes to express its sincere gratitude for the close cooperation and generosity in sharing information provided by Egyptian officials, in particular: His Excellency Minister Aly Moselhy, (Social Solidarity), and General Abo-Bakr El Guindy (Director of the Central Agency for Public Mobilization and Statistics- CAPMAS). Thanks also go to officials from the Ministry of Social Solidarity Dr. Anwar El Naquib (Economic Advisor), Eng. Noha Kaptan (IT Advisor), Mr. Hemdan Taha (First Undersecretary), Mr. Fathy Abdel-Aziz (Sector Director), Dr. Nehro Khalil (Advisor), Mr. Darwish Mostafa (Advisor), Miss Ahlam Roshdy (Sector Director), Miss Fatma EL Sherif (Sector Director), Miss Fatma Hefny (Advisor), and Mr. Mohamad Yehia (Sector Manager); and from CAPMAS: Miss Ghada Mostafa Abdalla (General Director), Mr. Ahmad Kamal Abedel Aziz (Central Administration Director), and Mr. Mohamad. M. Morsy (Director of Statistics Sector).

Richard Adams (Consultant), Trina Haque (Lead Economist and HD Coordinator, MNSHD), and Branko Milanovic (Lead economist, DECPI), of the World Bank were peer reviewers. Special thanks go to Richard Adams for providing written inputs into the various versions of the report. Helpful comments and continued guidance were received from Santiago Herrera (Lead economist) who was deeply involved in the different stages of work.

The team also benefited from the feedback and guidance by Ritva Reinikka (Director, MNSED), and Farrukh Iqbal (Sector Manger, MNSED). Valuable inputs from Tara Vishwanath (Lead Economist, MNSED) are gratefully acknowledged.

Finally, the team benefited from the overall guidance provided by A. David Craig (Country Director, MNCO3). The team also acknowledges funding from the Dutch Government through the Egypt Public Expenditure Review Trust Fund.

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Executive Summary

1. ***Egypt's food subsidies, important for ensuring political stability, do not target specific groups.*** The subsidies were introduced during World War II and have never been targeted. Egyptians seem to perceive food subsidies as the most concrete benefit they receive from government spending. Seen as an entitlement, food subsidies are politically sensitive. In 1977, a cut was attempted but it sparked violent riots. In 1981, measured reforms were resumed quietly, without much publicity. Since 2005, further changes have been introduced, such as enrolling children born after 1989 and changing the number and prices of subsidized foods in the ration card system; and separating production from distribution, introducing home delivery service, and liberalizing parts of the supply chain in the baladi bread system.

2. ***The system is costly.*** Egypt's food subsidies consist of two programs: baladi bread, which is available for purchase by all and ration cards which provide fixed monthly quotas of cooking oil, sugar, rice and tea to households holding these cards. The fiscal cost of food subsidies reached about 2 percent of gross domestic product (GDP) in 2008/09 (LE 21.1 billion, or US$ 3.8 billion) after stabilizing at around 0.9 percent of GDP between fiscal year 1996/97 and 2000/01. The rising cost of food subsidies can be explained by increased international commodity prices, exchange rate depreciation, increased number and/or quantities of subsidized food items, and expanding coverage of ration cards.

3. ***If leakages are eliminated and coverage is narrowed, the government of Egypt (GoE) could save up to 73 percent of the cost of food subsidies.*** A large part of the food subsidies are diverted away from the intended uses. Waste throughout the supply chain of subsidized foods, using subsidized baladi bread as animal or fish feed, and selling subsidized foods at a higher price in black markets or open markets are examples of what we call system leakages in this report. Furthermore, a large part of these subsidies, which are not targeted, go to the richest groups, while many poor do not receive any of these benefits. In 2008/09, LE 5.5 billion (28 percent) of food subsidies did not reach intended consumers, with baladi bread accounting for 68 percent of the leakage and cooking oil for 20 percent. In addition, cost savings from targeting subsidies are large. Two scenarios are examined here: one that is moderately tightened as it excludes the richest 40 percent of the population, while the more tightened option excludes the richest 60 percent of the population. Potential savings are LE 6 billion (30.5 percent) of food subsidies and LE 8.8 billion (44.7 percent) in these two scenarios, respectively. Meanwhile, about 27 percent of the poorest 40 percent of Egyptians do not benefit from ration cards, and 13 percent do not benefit from bread and wheat flour subsidies.

4. ***If GoE redistributes these savings to the poorest quintiles, their per capita benefits would increase considerably***. In 2008/09, reducing leakages to 10 percent and excluding the richest 40 percent could have saved LE 9.5 billion, or 48.6 percent of the cost. The savings could have increased to LE 12.3 billion (62.8 percent of subsidies) if the richest 60 percent were excluded. Assuming that these released resources have been evenly redistributed among the poorest 40 percent of the population, per capita food subsidies would have increased from LE 279 a year to LE 686 a year (2.5 times). If instead, the target group was the poorest 60 percent (i.e. the richest 40 percent have been excluded), per capita food subsidies would have increased from LE 258 a year to LE 468 a year (1.8 times).

Who Is Benefiting? Which Region? Which Income Group?

5. ***The food subsidy favors urban areas, especially Cairo.*** In 2008/09, Cairo Governorate received much more than the expected share according to its share of the population. In contrast,

all governorates in Upper Egypt, with larger shares of poor people, received much less than expected. However, this bias has declined over time.

6. ***The number of beneficiaries increased significantly between 2004/05 and 2008/09.*** In 2008/09, 81 percent of Egyptian households purchased baladi bread (up from 76 percent in 2004/05), 87 percent purchased baladi bread and baladi wheat flour,[1] and 68 percent were holding ration cards (up from 58.5 percent in 2004/05). The increase in the number of household beneficiaries was highest in rural Upper Egypt and among the poorest quintiles.

7. ***Consumer benefits also increased.*** Per capita benefits from baladi bread increased between 2004/05 and 2008/09 by almost half (in real terms) to LE 147 a year. When wheat flour is added, the per capita consumer benefits increase to LE 171 a year. Similarly, per capita benefits from ration cards increased to LE 125 a year (2.7 times). Urban consumers benefit most from baladi bread subsidies, while rural consumers from ration cards.

8. ***Consumer benefits from food subsidies are highest for baladi bread and cooking oil.*** At the national level, absolute consumer benefits are highest for baladi bread, amounting to LE 147/person/year, followed by cooking oil with per capita absolute consumer benefits of LE 53/person/year. These two subsidized foods represent the two leading sources of consumer subsidy benefits in all regions of Egypt, except in rural Upper Egypt, where per capita consumer benefits from subsidized baladi wheat flour (LE 67.8) are the second highest.

9. ***Except for wheat flour, food subsidy benefits accrued to the rich are larger than benefits accrued to the poor.*** In 2008/09, the richest quintile received about 12.6 percent more in absolute benefits from food subsidies than the poorest quintile. This regressive pattern prevails in all regions, except urban Upper Egypt. In rural Upper Egypt, the richest quintile received about 48 percent more in per capita benefits than the poorest group. That gap has narrowed only slightly between 2004/05 and 2008/09. In contrast, baladi wheat flour benefited the poorest quintile more than the richest in all regions, especially urban Upper Egypt.

10. ***Food subsidies lifted 9 percent of Egyptians out of poverty in 2008/09.*** Although food subsidies provide only a small proportion of total per capita consumption in Egypt, the incidence of poverty in Egypt would have increased from 20 percent to 30 percent in the absence of food subsidies. Baladi bread, the most important subsidized food, accounts for most of the poverty impact.

How Much Leaks to Non-intended Beneficiaries?

11. ***Leakages in the system cost the budget LE 5.5 billion in 2008/09.*** Baladi bread has the highest leakage (LE 3.7 billion), more than two-thirds of the total. Cooking oil has the second largest, with LE 1.1 billion not reaching intended consumers, one-fifth of the total.

12. ***Although declining, 31 percent of the wheat flour supplied to bakeries does not reach intended consumers.*** Leakages of baladi bread fell by 10 percentage points between 2004/05 and 2008/09, most likely as a result of the measures undertaken by the GoE to improve the efficiency of the baladi bread system. Had the profit margins of selling wheat flour on the black market not increased following the international food price crisis, the leakage could have declined even more. The leakage was highest in metropolitan areas (43 percent), but below average in Lower and Upper Egypt (27 percent in both). This may be due to the existence of additional sources of demand for wheat flour in metropolitan areas. The leakage of baladi wheat flour sold directly to consumers was only 13 percent, bringing down the overall leakage of wheat flour - whether supplied to bakeries or for direct consumption - to 29 percent.

[1] 2004/05 Household Income, Expenditure, and Consumption Surveys (HIECS) did not include data on expenditure on subsidized wheat flour. Therefore, a comparison between 2004/05 and 2008/09 is not possible.

13. ***In the ration card system, 26 percent of subsidies do not reach intended consumers, especially in metropolitan areas.*** Between 2004/05 and 2008/09, leakages of ration card foods either remained unchanged for rice (at 11 percent) or increased for cooking oil (from 26.7 percent to 31.4 percent) and sugar (from 18.7 percent to 20 percent). Leakages of these three foods fell sharply in Metropolitan Egypt, while increased sharply in Upper Egypt.

14. ***The higher the leakage, the higher the cost of delivering subsidies.*** In 2008/09, the cost of delivering LE 1 of food subsidies to intended consumers was highest for cooking oil (LE 1.46) and baladi bread (LE 1.45), and lowest for rice (LE 1.13) and wheat flour (LE 1.15). Sugar falls in between at LE 1.25. The increase in the cost of delivering LE 1 of ration card foods (up from LE 1.27 in 2004/05 to LE 1.35 in 2008/09) has almost offset the lower cost of delivering LE 1 of baladi bread to all consumers (down from LE 1.69 to LE 1.45).

A Vision for Reform: Policy Options

15. The food subsidy has advantages, but there is urgent need to start the reform process. In spite of several positive aspects of the food subsidy system in Egypt, mainly its significant poverty reduction impact, the study provides hard evidence on the large losses in the subsidy bill, whether in terms of leakages to non-intended beneficiaries or benefits received by non needy groups. International experience shows that Egypt's system is not different from universal subsidies and ration programs all over the world. They are all vulnerable to leakages, suffer from errors of inclusion and of exclusion, and are biased toward urban populations. Therefore, Egypt should benefit from other countries "good practices", on which there is a great deal of consensus. These good practices adopted a wide range of reform methods: i) elimination or phasing out such as Mexico's Tortivales (Free Tortilla) program, and Bangladesh's Palli rationing scheme; ii) reorganization of the system such as introducing targeting in the case of the Public Distribution System (PDS) in India; iii) drastic changes of the types of commodities distributed and the populations covered, such as in Tunisia; or iv) replacement by other programs, such as the rice ration program in Sri Lanka, which has been replaced by a food stamp program. Currently, only a few countries have universal food subsidies, but all have discussions on reforms.

16. ***The far-reaching coverage and long-standing nature of Egypt's system indicates the need for a phased approach to reform.*** Reforms to remove, reduce or drastically change subsidies are usually difficult to implement and are often marred by general discontent, political opposition, and sometimes riots. This explains why most of the governments hesitate to undertake such reforms. Also, actual implementation of reforms involves decisions on many details: the different programs of this safety net; entitled beneficiaries from each program; how much the government should spend on these programs, etc… And it usually takes time to achieve wider societal buy-in for all these details.

17. ***The policy options proposed here focuses on two broad sets that are directly related to the findings of this study:*** reducing system leakages and narrowing the coverage of the existing system.

Reducing Leakages

18. ***Continue to move baladi bread subsidies to the end of the supply chain***. There is evidence that the longer the distribution process and the larger the number of transactions, the more opportunities arise for leakage. Besides, incentives for agents to leak goods from one market to the other will persist as long as there is a substantial difference between the regulated price and the market price. Therefore, in addition to the separation of the production and distribution, and the attempts to introduce a flour tendering system in some governorates, the GoE also plans to purchase bread directly from bakeries at market prices and then sell it at subsidized

prices in the outlets. This process is expected to eliminate all incentives for agents to leak flour to the black market driven by the substantial differences between the subsidized price (LE160 a ton) and the market price (currently around LE1300). This process could perfectly involve enlarging the size of baladi bread bakeries, benefiting thus from economies of scale. Yet, to mitigate the adverse social impact of the implied reduction in the number of working bakeries, this transition has to be gradual with incentive and compensation packages to small inefficient bakeries to exit the market.

19. ***Ensure that the smart cards are enabling beneficiaries to get their full share of benefits***. Smart cards now cover 19 governorates but should cover the entire country before the end of 2010. Follow-up data from the MOSS show that the use of smart cards resulted in large savings in the procured quantities of subsidized foods (reaching more than 40 percent for additional cooking oil in some governorates). Still, there should be a third party evaluating how eligible beneficiaries are using the smart cards. A qualitative evaluation, including an observations module, should identify potential leakages between the consumer and the grocery shop owner. The recent decision to increase the price of subsidized basic quotas to the level of subsidized additional quotas (effective May 2010) is expected to reduce the incentive for "*tamween*" groceries[2] to manipulate the system.

20. ***Replace food subsidies with food coupons/stamps.*** Food stamps usually provide a way to phase out general food subsidies, as in Jamaica, Sri Lanka and Jordan. These programs have three main advantages in terms of reducing leakages and increasing effectiveness of subsidies:

a. *Their costs are lower than for in-kind food distribution programs*, because transporting, storing and distributing food is more expensive than moving food stamps around.

b. *They are effective in transferring income*. There is evidence that food stamps increase household income by as much as 20 to 25 percent.

c. *They can be self-targeting.* Self-targeting can be greater than with cash transfers if the use of coupons is limited to inferior (less preferred) foods, or with general subsidies as in the case of Jordan, where only two thirds of the population elected to obtain food coupons.

21. ***Institute effective monitoring and evaluation (M&E) throughout the system to help prevent leakage and fraud***. International experience shows that effective monitoring systems require a strategic focus and political support more than they require costly investments in information technology. Also, empowering local communities makes M&E even more effective. Leakages for the Vulnerable Group Development Program in Bangladesh were found only 8 percent, compared with the higher rates more common for other programs in South Asia. This was partly due to effective monitoring and evaluation throughout the system, in addition to women's empowerment at the local level to hold program managers accountable.

Narrowing Coverage

22. ***Use geographic targeting in the distribution of food subsidies***. To have equitable food subsidy system, the allocation of food subsidies should be more according to the shares of governorates in poverty. Thus, governorates that do not receive food subsides proportional to their shares in poverty should receive increased food subsidies. According to the budget constraints and political conditions, this can take place while keeping for a transient period the subsidies unchanged for other governorates that do receive shares of subsidies that are higher than their shares in poverty, or gradually dropping quotas or items received by these governorates.

[2] Tamween is an Arabic word that means supply or provision. And tamween groceries are the groceries licensed by GASC to sell subsidized foods under the ration cards.

23. ***Use targeting for an income-based assistance program for the poor.*** To reach poor individuals or poor households, several targeting methods are available: i) means test[3], whether unverified means like in Brazil, or verified means like in the United States; ii) proxy means[4] like in Mexico and Chile; and iii) the community-based targeting system[5] like in Bangladesh. In Egypt, the proxy means test needs to be updated and brought together in a national framework with appropriate information and administrative systems in place. Also, the smart card can be effectively used for poverty targeting. However, as other countries' experience show, shifting the primary mode of intervention is possible but likely to be associated with new problems, making program improvements a continuous process.

24. ***Improve self-targeting of food subsidies.*** Self-targeted programs are technically open to everyone, but they designed in such a way that the level of benefits is expected to be higher among the poor. Accordingly, home delivery service of the baladi bread should be wound down in favor of using distribution outlets for better geographic targeting to neighborhoods. Home delivery removes any stigma or transaction cost that wealthier households would otherwise face. Tunisia's major strategic shift in the early 1990s to improve the targeting of subsidies was toward self-targeting and quality differentiation.

25. ***Use the same targeting system for multiple programs, and multiple targeting methods within a single program to ensure good cost-effectiveness***. There should be an overall strategy of how to target food subsidies to the needy using a combination of targeting methods in any social assistance benefits. International experience shows that not only this can yield economies of scale in the targeting system, but can also lead to a more integrated package of support for households that may provide better risk management and more effective assistance for moving them out of poverty. Also, the use of multiple targeting methods within a single program generally produces better targeting than the use of a single method. In Egypt, work has been done on different parts of the targeting toolkits through MOSS and others but, as previously mentioned, it needs to be updated and brought together in a national framework.

26. ***This study provides hard evidence on the urgent needs to start the reform process of Egypt's food subsidy system that suffers from high system leakage and unduly wide coverage.*** The study also presents some broad policy options that directly address these two problems, and that would ultimately support a more comprehensive and effective social safety net system. A system in which the poor will receive more benefits from the government with less burden on the budget. Given the sensitivity of the topic, the nature and timing of reforms are critical to ensure their sustainability. Other countries experience has shown that the program's success is ensured by a combination of three factors: strong political support, gradual and ongoing drive to expand and improve the M&E system, and capacity to innovate. It was also shown that the public is more likely to accept reforms if the rationale behind the reforms is explained in advance. Hence, a communication strategy for subsidy reforms is important.

[3] The means test is a targeting method based on income that seeks to collect comprehensive information on household income and/or wealth and verifies the information collected against independent sources.

[4] Proxy-means test is a targeting method by which a score for applicant households is generated based on fairly easy-to-observe household characteristics, such as the location and quality of the household's dwelling, ownership of durable goods, demographic structure, education, etc...

[5] Community-based targeting is a targeting method in which a group of community members or leaders (whose principal functions in the community are not related to the transfer program) decide who in the community should benefit.

EGYPT'S FOOD SUBSIDIES: BENEFITS AND LEAKAGES

1. Introduction

1. ***Food subsidies have always attracted particular attention.*** When they were introduced during World War II, they involved only a small share of government resources and were not targeted. The aim was to mitigate the adverse effects of food shortages and inflation. After the 1952 revolution, the food subsidies continued to provide minimum quantities of basic food items for most Egyptians, with no attempt to target any specific group. Yet, they have become important for ensuring social and political stability. Egyptians see food subsidies as the most concrete benefit they receive from the government spending. Of all other subsidies, only those for food and energy are explicitly reported in the government budget.

2. ***After a large expansion in the 1960s and 1970s, the system was gradually reformed in the 1980s and 1990s.*** As part of a broader consumer welfare program that was subsidizing transport, housing, and energy, food subsidies rose to more than 20 percent of government spending in mid-1970s. Because the cost was becoming unsustainable, a cut was attempted in 1977, but it was perceived as "unfair." Sparking violent riots, it was reversed in a few days (Gutner et al. 1998). In 1981, reform efforts resumed. Given the political sensitivity, a gradual, measured, and quiet reduction of food subsidies, particularly for baladi bread, was undertaken without much publicity. These measures included targeting ration cards through red cards that offer lower subsidy ratios for higher income beneficiaries, and reducing the number of subsidized foods consumed mainly by higher income groups.[6] The government also controlled the rise in the number of ration card beneficiaries, improved scrutiny application, and reduced subsidies through various techniques through gradually reducing the quantity of a particular subsidized food and in some cases gradually replacing it with a more expensive version.[7] Food subsidy cost was cut to 5.6 percent of government spending in 1996–97, without unrest (Ahmed et al. 2001).

3. ***Further changes were introduced, yet food subsidies remain costly and fail to reach many of the poor and vulnerable.*** Since 2005, there have been changes in the eligibility criteria, the number and prices of ration card food items, and the production and distribution of baladi bread. But, the system is still costly, accounting for almost 2 percent of GDP and suffering from large leakages. Baladi bread subsidies, the largest component of food subsidies, are open to all Egyptians, and ration cards cover more than two-thirds of Egyptians. If the system were to target specific groups, the swings could be huge.

4. ***The need to reform food subsidies is unquestionable.*** Many previous reports emphasize the need for reforming food subsidies in Egypt (Akhter et al. 2001; World

[6] For example, meat, chicken, and fish were removed from the subsidy program.

[7] An example is the unprotested increase in the price of bread from 1 piaster to 2 piasters in 1984 and to 5 piasters in 1989. The government's strategy was to introduce a higher quality and less subsidized new loaf alongside the old one, with the latter becoming harder to find and deteriorating in quality over time. This led people to eventually switch to the widely available new loaf without complaint (Sadowski 1991). Other examples of this quiet reform process for baladi bread include reductions in loaf size (from 168 grams to 160 grams in 1984 and to 130 grams in 1991) and the addition of maize flour in some areas.

Bank 2005, 2007, and 2010; WFP 2008). Only Akhter et al. (2001) assessed the leakages in the system, underscoring the need to measure the cost of leakages and the incidence of benefits. Reducing the leakage would improve the efficiency of public spending, and targeting subsidies to poorer groups would improve the system's effectiveness in reducing poverty. The availability of two recent HIECS data (2004/05, 2008/09) made it possible to assess the system.

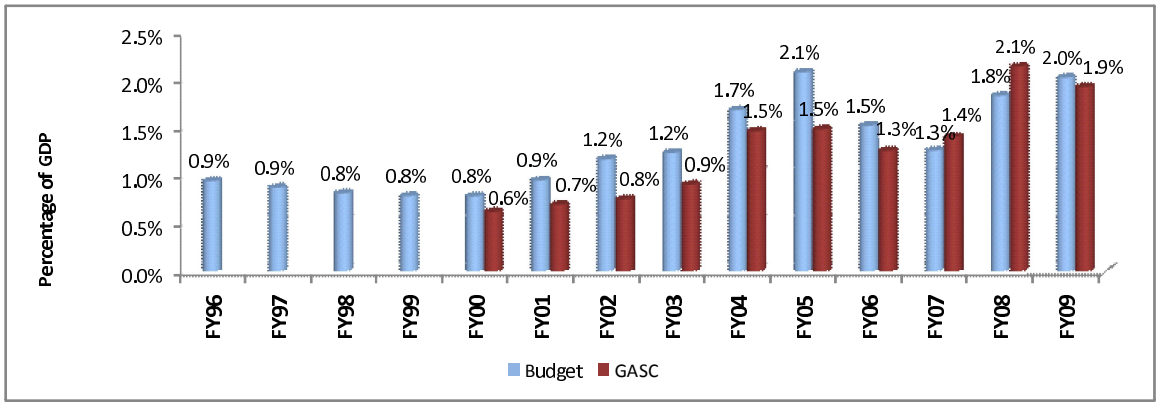
5. Section 2 gives the historical background of the food subsidy system and discusses past and planned food subsidy reforms, Section 3 analyzes the geographical allocation of subsidized food items and how the allocation corresponds to population and poverty distribution, and Section 4 analyzes household participation in food subsidies by income group and geographic region. Section 5 uses all this information to measure the cost of subsidies that do not reach intended consumers, or the system leakage, and the potential cost savings from excluding the richest groups from food subsidies. In Section 6, the key findings are summarized and a vision for long-term reforms is outlined

2. The Egyptian Food Subsidy System in the 2000s

Background

6. ***The fiscal cost of food subsidies has increased in recent years.*** After a series of gradual reforms in the 1980s and 1990s,[8] the cost of food subsidies stabilized at about 0.9 percent of GDP during the period FY97 to FY01. However, in recent years this cost has risen, reaching about 2 percent of GDP in FY09 (LE 21.1 billion, or US$ 3.8 billion) (see fig. 2.1). The rising cost of Egyptian food subsidies can be attributed to increased international commodity prices, mainly in wheat[9]; exchange rate depreciation; increased numbers and/or quantities of subsidized food items; and coverage expansion of ration cards.

Figure2.1: Fiscal Budget Cost of Food Subsidies



Sources: Calculated by the authors, using the Ministry of Finance (budget) and General Authority of Supply Commodities (GASC) data.

[8] Reforms included reductions in the number of rationed items and ration-card holders, and increases in the price of baladi bread (from 1 to 2 piasters in 1984 and to 5 piasters in 1989).

[9] While Egypt imports significant amounts of the most basic food items, its food-commodity exports are modest. Egypt is the second-largest importer of wheat worldwide, the fifth-largest importer of maize, and the fourth-largest importer of vegetable oils. Unsurprisingly, domestic prices of these foods respond quickly to increases in world food prices. Yet, the response is much slower and weaker to decreases.

7. ***There are two basic sources of data on the costs of food subsidies in Egypt.*** First, the Ministry of Finance's (MOF) published fiscal budget that reports the subsidy bill to the General Authority for Supply Commodities (GASC), and second, GASC unpublished data that are estimated by subsidized food item.[10] Since FY96, food subsidy cost is higher in the fiscal budget than in the GASC data, except for FY07 and FY08 (fig. 2.1). In this study, all measures of subsidy cost (the supply side) are based on GASC data that reflect actual government spending on food subsidies and provide information by type of food and by governorate, which is not available from MOF data (box 5.1). So, subsidy cost estimates in this report underestimate the actual cost, because the fiscal budget figures for food subsidies are higher than the GASC figures and more important, the administrative cost[11] is not included in our calculations as it is not available.

8. ***The Egyptian food subsidies consist of two programs: Baladi bread and ration cards.*** Baladi bread is made from 82 percent extraction-rate wheat flour[12] and is the only subsidized bread in the country. Baladi bread, available for purchase by all Egyptians, is the most important bread consumed in Egypt and accounts for over 70 percent of the cost of Egyptian food subsidies. In contrast, ration cards provide fixed monthly quotas of basic and additional subsidized foods to households. Until May 2010, ration cards were including basic (or compulsory) quotas of sugar and cooking oil and optional quotas of sugar, cooking oil, rice, and tea. The quantity of ration card items received by a household depends on the number of household members registered on the ration card (see annex box 1 for more details).

9. ***While Egypt's spending on food subsidies is similar to that in other MENA countries, it is much higher than in developing countries in general.*** In recent years there has been a marked movement away from generalized, universal food subsidies toward more targeted programs, and from the use of food toward the use of cash.[13] A recent innovation is conditional cash transfer programs, which provide income support to families while requiring them to invest in their children's health and education (Grosh et. al., 2008). However, in Egypt, as in other Middle East and North Africa (MENA) countries, governments still spend significant amounts on generalized food subsidy programs and very little on cash transfers. As shown in Table 2.1, Egypt spent about 1.8 percent of GDP on food subsidies in 2007/08,[14] only marginally higher than that for

[10] GASC data measure subsidies as the difference between the cost of purchasing and the sales revenue of subsidized food items.

[11] For example, how much does it cost the government to have inspectors for bakeries and groceries that sell ration card items (tamween groceries)? How much does it cost to have supervisors for these inspectors? What does it cost in wages, transport, and office expenses for these inspectors and supervisors? What is the cost of the administrative body that assesses new bakery/tamween grocery applications? Several surveys are needed to estimate these costs.

[12] There are two main types of Egyptian baladi bread: The brown subsidized baladi bread, made of 82 percent extraction-rate wheat flour (also called baladi wheat flour), is sold for LE 0.05/loaf, and white baladi bread is made of 76 percent extraction-rate wheat flour and sold in the free market for LE0.25-0.50/loaf depending on the size. There is also another subsidized baladi bread called tabaki that is also made of 82 percent extraction-rate wheat flour, but is produced in only limited quantities (around 4 percent of subsidized baladi bread production) and is sold for LE 0.1/loaf.

[13] For example, universal food distribution programs were prevalent in North Africa, South Asia, and sub-Saharan Africa until the early 1990s when they were proven to be far too expensive and ineffective in reaching the poor, especially in rural areas (see Alderman and Lindert 1998 and Tuck and Lindert 1996 on the reform process in Africa; and Dev et al. 2004 and Mooij 1999 on India).

[14] The cash transfer program in Egypt is less than 0.2 percent of GDP.

Jordan (1.7 percent) and Tunisia (1.5 percent). Yet, other developing countries outside of MENA spend much less on food subsidies. For example, Indonesia spends about half as much as Egypt and Pakistan spends about 95 percent less.

Table 2.1: Expenditure on Food Subsidiesin Selected Countries, 2008

Country	Food Subsidies (percent of GDP)
Egypt	1.8
Jordan	1.7
Tunisia	1.5
Morrocco	1.2
Indonesia	0.9
India	0.7
Senegal	0.5
Costa Rica	0.5
United States	0.25
Ethiopia	0.1
Pakistan	0.04

Sources: World Bank and IMF 2008a and 2008b.

Food Subsidies: Size, Relative Importance and Subsidy Ratios

10. Subsidies on baladi bread dominate the food subsidies. Baladi bread is still the most important subsidized food commodity in Egypt, accounting for almost 70 percent of the cost of Egyptian food subsidies (see table 2.2). Subsidized cooking oil and sugar are the next most important. From 2004/05 to 2008/09, cooking oil and sugar subsidies increased faster (227 and 239 percent, respectively) than baladi bread subsidies (111 percent), reflecting different food price increases in the international market.

Table 2.2: Food Subsidies in Egypt: Quantity and Value, by Commodity (2004/05 and 2008/09)

	Quantities (,000 tons)			Subsidies (million L.E)		
	2004/05	2008/09	Change (%)	2004/05	2008/09	Change (%)
Baladi Bread Wheat Flour	7,344	8,281	13	6,328	13,338	111
Cooking Oil	176	412	135	699	2,287	227
Cooking Oil, additional	189	387	105	288	1,252	335
Sugar	470	747	59	633	2,147	239
Sugar, additional	-	498	-	-	-	-
Rice	374	971	160	422	561	33
Tea	18	10	(41)	(23)	6	(127)
Lentil	84	-	-	142	-	-
Macaroni	472	-	-	330	-	-
Bean	106	-	-	68	-	-
Ghee	91	-	-	57	-	-

Source: GASC (unpublished data).

11. *The presence of subsidized food creates two definitions of subsidies: The supplier's (government) point of view and the consumer's point of view.* These two definitions of subsidies are calculated differently. The *subsidy cost to the government* of any food item is calculated as the difference between the purchasing cost to the government and the subsidized selling price. The *subsidy benefit to the consumer* is the

difference between the price households would pay on the free market and its subsidized price. Information needed to calculate the *subsidy cost to the government* is provided by GASC and Ministry of Social Solidarity (MOSS) and data to calculate the subsidy *benefit to consumers* is derived from HIECS of the Central Agency for Public Mobilization and Statistics (CAPMAS).

12. ***Subsidy and consumer benefit rates in Egypt vary widely by food item.*** The subsidy cost to the government varies widely between food items. The government subsidy cost ratio ranges between 85 percent for basic cooking oil and 21 percent for sugar, and the consumer subsidy benefit ratio ranges between 81 percent for baladi bread and 67 percent for rice (see table 2.2). For all food items, the consumer benefit ratio is much higher than the government subsidy ratio. This means that LE 1 of food subsidy generates more than LE 1 of consumer benefit.

13. ***Both government and consumer subsidy rates have increased over time.*** Government subsidy rates increased for all food items (except rice) between 2004/05 and 2008/09, mainly due to rising world food prices, while subsidized prices remained unchanged. This led to an increase in consumer subsidy rates over time. For example, the consumer subsidy rate for baladi bread has increased from 78 to 81 percent and for rice, 50 to 67 percent.

Table 2.3: Subsidy Rates for Individual Food Items, 2008/09 and 2004/05

	2008/09						2004/05*					
	GASC			Consumers (HIECS)			GASC			Consumers (HIECS)		
	Cost	Price	Government subsidy ratio %	Survey market median price	survey subsidized price	Consumer benefit subsidy ratio	Cost	Price	Government subsidy ratio %	Survey market median price	survey subsidized price	Government subsidy ratio %
Baladi bread ****	0.24	0.05	80.80	0.27	0.05	81.48	0.17	0.05	66.93	0.23	0.05	77.84
Baladi wheat Flour **	2.16	0.60	77.20	3.00	0.60	80.00	1.35	0.60	63.70			
Cooking Oil ***	6.50	1.00	84.60	9.50	2.03	78.63	4.90	1.00	79.58	5.00	2.25	55.00
Additional cooking	7.32	4.25	41.92				4.68	3.50	25.20			
Sugar ***	2.59	0.60	76.85	3.00	0.85	71.67	1.84	0.60	67.33	2.25	0.60	73.33
Additional Sugar	2.59	1.75	32.48									
Rice	7.90	1.50	20.92	3.00	1.00	66.67	2.00	1.00	49.97	2.00	1.00	50.00
Tea	11.49	13.00	-13.12	25.00	13.00	48.00	11.28	13.00	-15.24	20.00	13.00	35.00

Notes: * Six other food items subsidized in 2004/05 were not included in our calculations, as they are no longer in the system.

** In 2004/05 HIECS, there were no questions regarding subsidized wheat flour.

*** In the absence of official estimates for the cost to produce one loaf of bread, an approximate cost was estimated using the data on wheat subsidies provided by GASC. The equivalent quantity of flour was calculated by multiplying the wheat quantities supplied by GASC to bakeries by 82 percent. The product number in tons was then divided by 10,380 (assuming a perfectly efficient system with no leakage, waste, or undue losses) to get the number of loaves produced. The cost of one loaf was obtained by dividing the total cost of bread subsidies, as provided by GASC, by the number of loaves produced.

****In HIECS data, there is no information on individual prices of basic and additional quotas of cooking oil and sugar, but only a weighted average price of both quotas.

Source: Calculated by the authors from GASC and HIECS of 2004/05 and 2008/09 data.

Reform and Adjustment Measures

14. The food subsidy program has been an important source of food security for a large portion of the population. Although over the past decade GoE has taken a number of measures to reduce the leakage and increase the coverage of poor and vulnerable, more needs to be done.

Subsidized Bread

15. ***Evidence suggests that the baladi bread program still needs to be reformed to become more efficient and effective in reaching the poor.*** Previous studies have shown the need to improve the effectiveness of Egyptian food subsidies, particularly the subsidy on baladi bread (World Bank 2005, and WFP 2008). Problems with the baladi bread subsidy intensify when the world price of wheat rises, and the gap between the free market and subsidized prices of baladi wheat flour widens. At these times, bakeries are tempted to sell baladi wheat flour on the black market, reducing the supply of baladi bread to consumers. During the last food price crisis, very long queues developed at baladi bread bakeries because the demand for baladi bread greatly exceeded the supply (World Bank 2010).[15] This was despite various changes that GoE introduced to the baladi bread program,[16] the most important of being:

- ***Separation of production and distribution:*** This reform assigns the delivery of baladi bread to an independent distribution outlet (usually a short walk from the bakery) rather than the producing bakery. This reform is designed to reduce leakages by providing a more accurate measurement of baladi bread being sold to consumers and limiting the degree to which flour can be diverted to the black market. The main disadvantages of this reform are the additional costs involved in transporting the bread from the bakery to the outlet, building the outlet, and paying the staff salaries. At present, approximately 60 percent of baladi bread is now sold in these distribution outlets.

- ***Introduction of home delivery:*** In this reform, a household pays LE 3, LE 4, or LE 5 a month, depending on the district, to have baladi bread delivered to the home. This reform reduces the time people have to wait in queue, and is more convenient for people who do not live near a bakery. More important, the system permits the recording of the address of the beneficiary, which should help reduce leakages. One disadvantage is the extra cost. It is also possible that this reform will increase the bread subsidy benefits going to better-off consumers, since spending time in a queue represents an important means of self-targeting to the poor (rich people being less inclined, and often having less free time, to wait). At present, only a small proportion of Egyptians have access to home delivery, but it is planned to eventually extend the service to 100 percent of the population.

- ***Tendering for flour directly from the mills:*** This reform aims to reduce leakages in the flour supply chain (mills) by having a competitive tender for flour deliveries to bakeries. The government would purchase the flour at "market prices" and then sell that flour to

[15] Demand increased as consumers had to substitute subsidized bread for suddenly more expensive foodstuffs (including free market bread) and supply decreased as the black-market price for subsidized flour rose dramatically.
[16] For more details, see Coelli 2010.

bakeries at the subsidized price. In early 2009, this reform was in trial in four governorates.[17]

- ***Building large public–private partnership (PPP) bakeries and using the Defense Force bakeries.*** This is to avoid bread shortages during any future crises.

- ***Curtailing the sale of baladi wheat flour in the governorates where the population prefers ready-made baladi bread.*** To reduce the leakage of baladi wheat flour benefits, GoE has reallocated to bakeries the quotas of subsidized wheat flour that used to be for direct consumption in the governorates that prefer ready-made bread. Consequently, the quantities of flour allocated for direct consumption declined by 11.4 percent between 2004/05 and 2008/09, while quantities distributed to bakeries increased by 15 percent.

Ration Cards

16. Since 1981, the ration card system has been modified in three ways: (1) changing the items covered by the ration card, (2) adjusting the prices of additional items, and (3) modifying some of the eligibility criteria (see annex box 1).

17. ***In mid-2004, seven additional food items were added to ration cards.*** After the Egyptian pound flotation in January 2003, the exchange rate depreciated by more than 30 percent, which increased food prices dramatically. This coincided with a decline in local wheat production. In response, GoE added to the basic quotas for sugar and cooking oil seven more quotas (named additional quotas) for cooking oil, rice, macaroni, beans, lentils, ghee, and tea.

18. ***In mid-2006, when food prices and inflation declined in 2006, GoE removed macaroni, beans, lentils, and ghee from ration cards***. This move was made because consumer preference for these items was relatively low, despite the important contribution that they made to the household diet (WFP 2005). In return, GoE introduced an additional quota for sugar at a higher price than that for basic sugar (see annex box 1).

19. ***In 2008, GoE greatly increased the number of ration card holders.*** The most important decision about ration cards was in May 2008 when GoE decided to add all those born between 1988 and 2005 to the ration card system. According to GASC data (see annex tables 9 and 10), this single move added more than 23 million Egyptians to the ration card system—40 million cardholders in 2004/05 (56 percent of the population) to 63 million in 2009 (more than 80 percent of the population).[18] While the number of individuals in the system increased by 60 percent, the number of households rose by only 14 percent as the main source of increase was the addition of those born after 1988 in households that already held ration cards. Before and after this, the system has been opened several times for other specific groups, such as the recipients of government cash-assistance transfers (social solidarity pension), widows, divorced women, women heading households, and chronically sick persons.

20. ***In addition, GoE piloted a smart card system.*** These new smart cards contain embedded chips with data on the household head's monthly quota of subsidized goods, as well as other household information. The new cards allow GoE to track the

[17] See a discussion on the advantages and the potential problems of this system in Coelli 2010.

[18] We will see later that HIECS data does not show the same order of magnitude in the increase of ration card's beneficiaries.

distribution and consumption of subsidized goods by recording transactions electronically. So far, smart cards have been issued to ration card holders in 20 governorates[19] and are being issued to applicants in the remaining 9 governorates. The aim is to have the smart card system in place by June 2010.[20] GoE hopes that the successful implementation of the smart card system will eliminate leakages in food subsidies in the short term and facilitate the transition to a cash-transfer system when it is later decided to substitute in-kind subsidies.

21. ***The main goal of this study is to estimate the cost of delivering LE 1 of food subsidy benefits to consumers.*** To achieve this goal, we should first estimate system leakages—defined as the illegal diversion of subsidized foods away from the intended consumers to those who gain access to and sell the subsidized foods at a higher price in parallel markets or open markets, and any possible waste/loss in the different parts of the food subsidies supply chain (storage, transportation, milling, etc..). This is calculated as the difference between the quantities of subsidized foods as supplied by GASC to bakeries, baladi wheat flour warehouses, or *tamween* groceries and the quantities of these foods as estimated in the HIECS da*ta. The* financial cost to GASC is then calculated using the subsidy ratio of the relevant subsidy food. Finally, the cost of delivering LE 1 of food subsidy benefits is calculated as the quotient of subsidy cost and benefits received by consumers.

22. ***At the outset, it is important to identify who is benefiting from food subsidies.*** As mentioned above, the Egyptian food subsidy system is not meant to target any specific groups, yet it is important to examine the potential savings from different targeting scenarios. In any society, there should be some specific groups that social policies target. One criterion to use in determining these groups is income or consumption expenditure as proxy for income. The present study will estimate the potential savings in two targeting scenarios. GoE is assumed to target the poorest 40 percent of the population in the first scenario, and the poorest 60 percent in the second. The first scenario targets almost all Egyptian poor and near-poor. According to the latest 2008/09 HIECS data, the poor constitute 22 percent of the Egyptian population, but there is another 19 percent that is near-poor (i.e., vulnerable or potentially poor). By adding another 20 percent of the population in the second scenario, we ensure that food subsidy system covers poor, near-poor, and the lower middle-income groups in the country.[21]

23. ***The analysis conducted in this study is primarily based on two main data sources:*** (1) Official government data from GASC and the MOSS, to highlight the supply-side dimension of the food subsidy system; and (2) household data from the 2004/05 and 2008/09 HIECSs, to capture the demand dimension of the food subsidy

[19] These are Suez, Alexandria, Port Said, Sharkeya, Menoufeya, Ismailia, Behera, Qualyoubia, Dakahleya, Damietta, Helwan, Sohag, Luxor, Beni Suef, Quena, Aswan, Red Sea, Marsa Matrouh, Northe Sinai, and South Sinai.

[20] This is a significant success in scaling up the smart card system as beneficiaries using these cards were estimated at 1 percent of the population in a recent report (WFP 2008, p.65)

[21] Any household that spends less than the lower poverty line is considered poor, and households that spend less than the upper poverty line is judged as non-poor. The lower poverty line emerges when the food poverty line is adjusted for expenditure on non-food goods by households who have to forego food consumption to purchase indispensable non-food items. The non-food allowance can be estimated by identifying the share of non-food expenditure for households whose total expenditure was equivalent to the food poverty line. If, instead, the non-food component of the poverty line is estimated as the non-food expenditure of households whose food expenditure equals the food poverty line, the upper poverty line emerges.

system. However, the data availability limitations preclude the possibility of distinguishing the system leakage and thereby the cost of delivering LE 1 of basic quotas for subsidized sugar and cooking oil from those of additional quotas as HIECS data do not make such distinction. Also, since GASC data provide information about food subsidies at the governorate level with no distinction between rural and urban areas, it was not possible to estimate the system leakage at this geographical disaggregation level. Finally, tea was excluded from the analysis, because tea subsidies were too small in 2008/09 (see Table 2.3). For these reasons, the study covers the main five subsidized foods: baladi bread, wheat flour, cooking oil, sugar, and rice. But wheat flour is not part of the comparison over time.

24. ***It is worth noting that the sample designs of both of the HIECSs used in this study are nationally representative.*** The size of 2004/05 and 2008/09 HIECSs are large enough (almost 48,000 households) to allow for inferences at the regional and governorate levels. However, since sample sizes are small for the border governorates,[22] they are not included in the analysis, although all the data are shown in the annex tables. With respect to comparing HIECS results with those of Akhter et al. 2001, it should be noted that the sample size for the latter was much smaller (only 2,500 households), making the results of HIECS and Akhter et al. 2001 surveys not strictly comparable. Nonetheless, comparison will be made whenever relevant.

3. The Geographical Distribution of Food Subsidies

25. In this section, we examine the geographical distribution of food subsidies and its relation with the population and poverty shares. The distribution of food subsidies can be regarded from the supply side—how GASC allocates quotas of various subsidized food items in different governorates—and from the demand side—how the consumer benefits from food subsidies are distributed in Egyptian governorates. In the following, we analyze both aspects of the geographical distribution and assess whether they yield the same results.

26. ***Quotas of subsidized food items delivered to Egypt's governorates continue to be determined by the central government.*** With respect to flour, the Central Department of Planning at MOSS determines the size of each governorate's share by extrapolating from past allocations using population growth in each governorate. The quotas of flour delivered to bakeries to produce baladi bread are then determined by MOSS based on the bakery's share in the total quota received by the governorate in previous years. The annual need for ration cards at the governorate level is determined by MOSS based on the number of beneficiaries provided by the General Department for Cards Affairs. The number of ration cards at the level of the villages and districts (*markaz*) is subject to annual revision by local *tamween* offices. The High Committee for Commodities Distribution at the governorate level manages the distribution of all subsidized food items to *tamween* groceries and subsidized baladi bread bakeries.

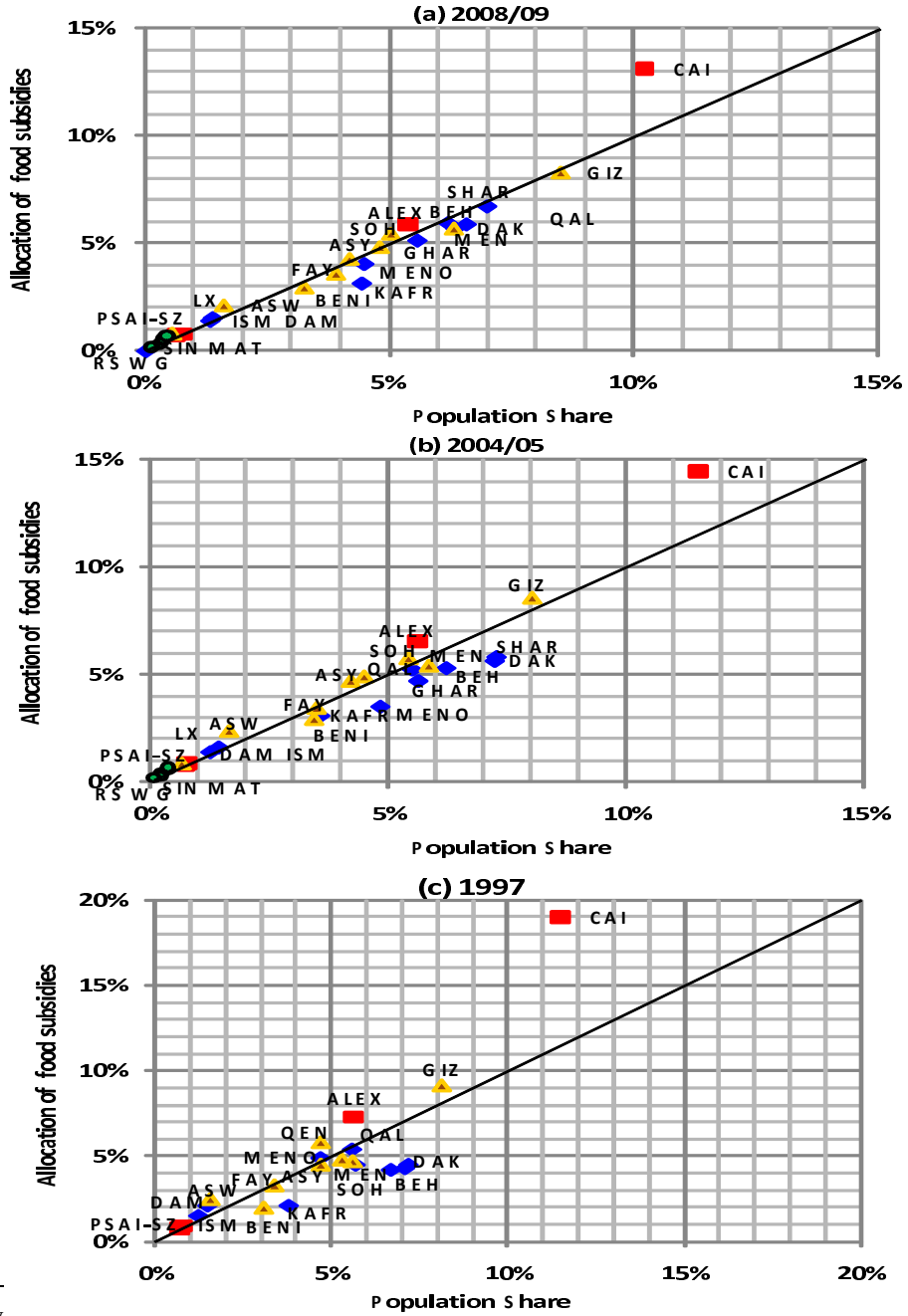
27. ***Food subsidy allocation by population share favors Cairo, but this has improved somewhat over time.*** In fig. 3.1, the line from bottom left to top right is the 45 degree line that indicates an allocation of food subsidies that is exactly equal to the share of total population in the governorate. As shown in panel (a), in 2008/09 Cairo Governorate received much more in food subsidies than could be expected based on its share of the Egyptian population. All other governorates in panel (a) are clustered around the 45 degree line. Panels (b), based on 2004/05 data, and (c), derived from Akhter et al.'s 2001 data, show an even stronger bias in the distribution of food subsidies towards Cairo Governorate. These results suggest that the bias in the distribution of food subsidy allocations to Cairo has improved a bit over time. This could be the result of increasing geographic targeting of food subsidies in Egypt as a whole.

28. ***The food subsidy allocation by poverty share also favors Cairo.***[23] In all years, Cairo Governorate receives much more in food subsidies than could be expected based on its share of the poor population (fig. 3.2). In contrast, all of the governorates in Upper Egypt, which have larger shares of poor people than Cairo, receive much less in food subsidies than could be expected. For example, panel (a) shows that in 2008/09 the five Upper Egyptian governorates with the largest shares of poor people—Asyut, Sohag, Minya, Qena, and Beni Suef—all received much less in food subsidies than could be expected. The data suggest that at the governorate level in Egypt there is a weak relationship between the allocation of food subsidies and poverty share. Even the poverty gap—only 0.34 in Cairo, as opposed to 1.0 in Luxor and 6.15 in Assiut—does not explain

[23] Poverty lines used in this section are the lower poverty lines. Accordingly, regional reference poverty lines in monthly per-capita figures are estimated for 2008/09 at: LE 183 in Metropolitans, LE178.7 in urban Lower Egypt, LE189.5 in rural Lower Egypt, LE180.1 in urban Upper Egypt, and LE 184.7 in rural Upper Egypt (WB 2010, work in progress). All poverty estimates reported in this study are based on CAPMAS HIECSs of 2004/05 and 2008/09.

the observed Cairo bias.[24] Finally, compared with 2004/05, food subsidy allocations in 2008/09 generally correspond better to the share in the poor population in some governorates. For example, Sharkeya, one of the pilot governorates in many of the policy changes, received less than the expected allocations in 2004/05 but moved closer to the equality line in 2008/09.

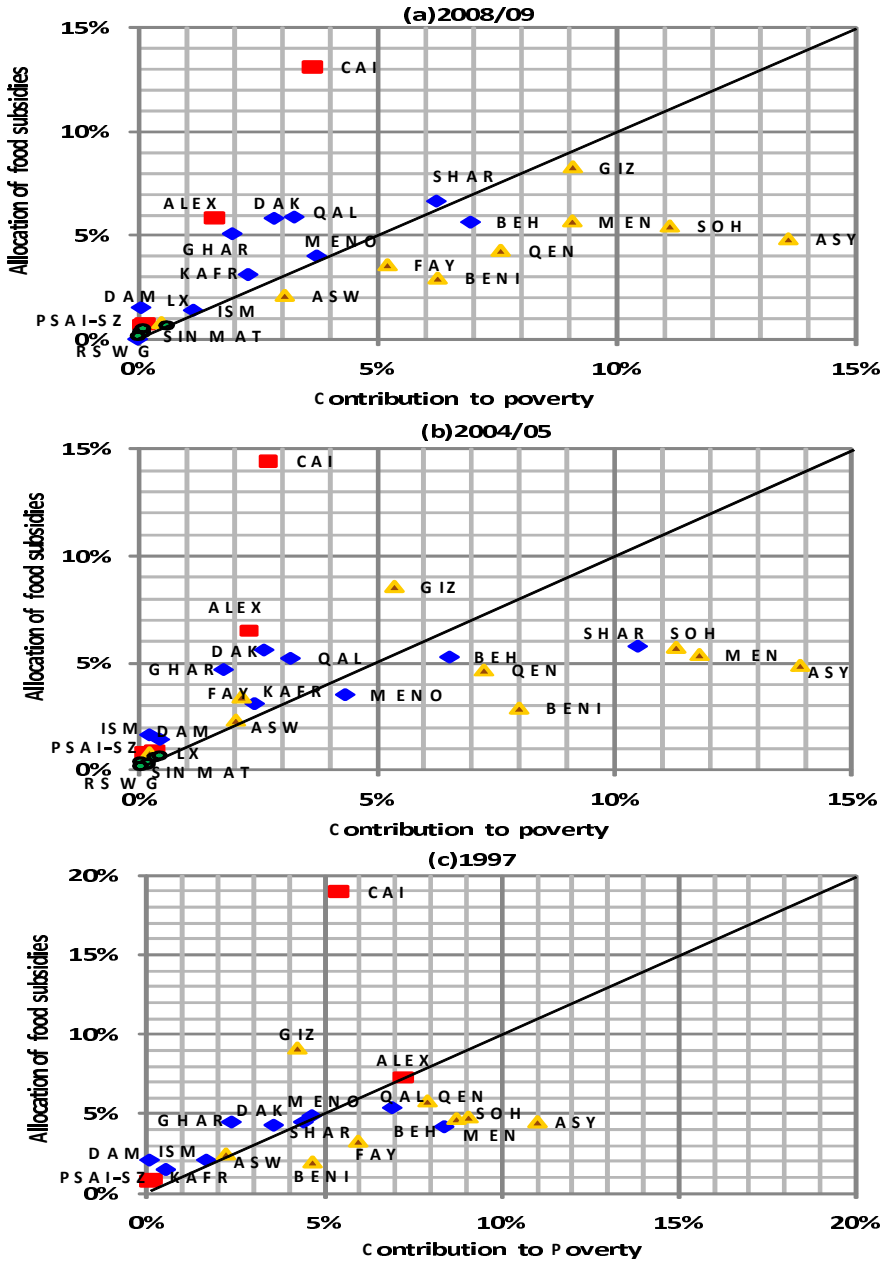
Figure 3.1: The Relationship Between the Distribution of Food Subsidy Quotas and Population by Governorate



Source: Calculated by the authors using GASC data on food subsidies and CAPMAS data on population for 2004/05 and 2008/09. Data in panel (c) are from Akhter et al., 2001.

[24] The poverty iture levels of poor housel eflects the minimum amount of consumption that would need to be transferred to pull all the poor up to the poverty line.

Figure 3.2: The Relationship Between the Distribution of Food Subsidy Allocation and Shares in Total Poverty, by Governorate

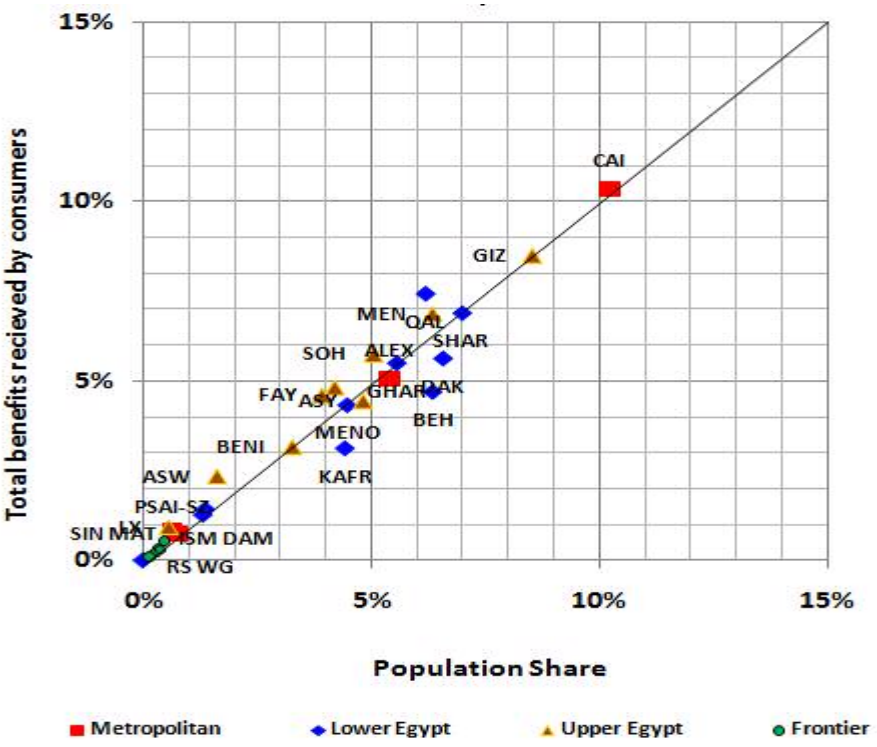


Source: Calculated by the authors using GASC data, CAPMAS, HIECS 2008/09 in panel (a); CAPMAS, HIECS 2004/05 in panel (b); and Akhter et al. (2001) in panel (c).

29. ***The same can be said for the allocations of bread subsidies***. Cairo and the other metropolitan governorates, as well as Giza and Qualiobya, also receive more in subsidies on baladi bread than could be expected based on their share of the poor population. In 2008/09 Cairo and other metropolitan governorates received about 38 percent of bread subsidies, while their share of the poor population was only 14 percent. These figures suggest that there is considerable room for improving the effectiveness of baladi bread subsidies by geographically targeting poor regions of the country (like Upper Egypt). Increasing the use of poverty maps could greatly improve the ability of policy makers to geographically target bread and food subsidies to poor districts and villages in Upper Egypt.

30. ***In general, the distribution of consumer food subsidy benefits corresponds more closely to population shares than does the allocation of the food subsidy cost.*** In fig. 3.3, since all governorates are clustered very close to the 45 degree line, this suggests that consumer benefits from food subsidies are fairly equally distributed in terms of share of the population living in each governorate. The difference between the supply-side pattern (as reflected by the subsidy allocation) and the demand-side pattern (as reflected by the distribution of consumers' benefit from subsidies) can mainly be attributed to the fact that benefits received by consumers are net of system leakages of subsidized foodstuffs and that the magnitude of these leakages varies widely among the regions.

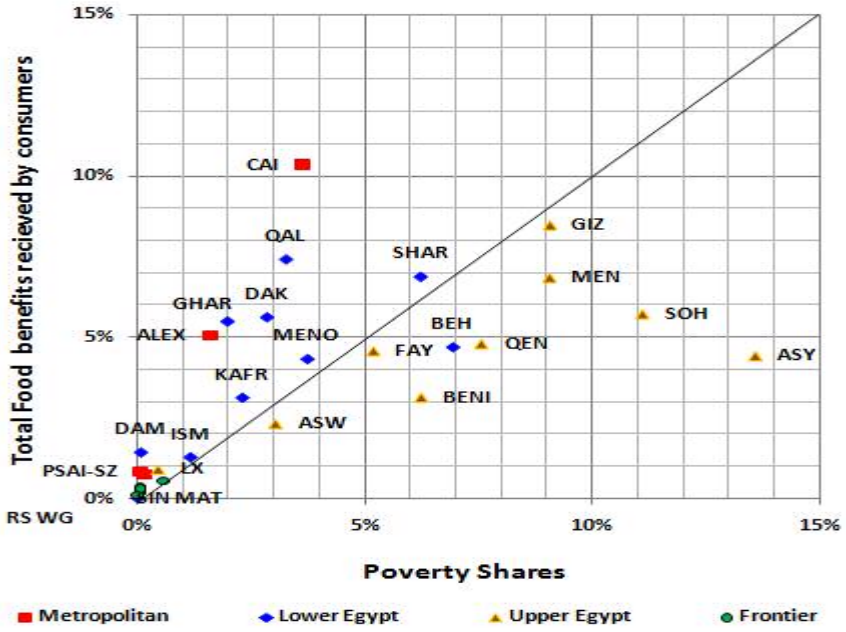
Figure 3.3: The Relationship between the Distribution of Consumers' Benefits from Food Subsidies and Population, by Governorate 2008/09



Source: Calculated by the authors, using CAPMAS' HIECS 2008/09 and data on population.

31. ***However, when measured against their contribution to poverty, the pattern of consumer benefits from food subsides does not differ much from the pattern of government subsidy allocations.*** In fig. 3.4 reveals that consumers in Cairo Governorate receive much more in benefits from food subsidies than could be expected based on the share of the poor population living in Cairo. In contrast, consumers in all of the governorates in Upper Egypt, which have larger shares of poor people than Cairo, receive much less in benefits than what would be expected. This is especially true for consumers in the Upper Egyptian Governorates of Asyut, Qena, and Sohag.

Figure 3.4: The Relationship between the Distribution of Consumer Benefits from Food Subsidies and Poverty, by Governorate 2008/09



Source: Calculated by the authors, using CAPMAS' HIECS 2008/09 data.

32. ***In addition, there is an urban bias in the distribution of food subsidy consumer benefits in Egypt, though decreasing over time.*** Table 3.1 shows that in 2009 real per capita benefits from food subsidies were about 10 percent higher in urban than in rural areas (LE 197 a person a year versus LE 178 a person a year). So, 58 percent of all Egyptians lived in rural areas but rural areas received only 54 percent of food subsidy benefits in 2009. In recent years, the extent of urban bias in food subsidy benefits has fallen as benefits to rural areas have increased. Between 2004/05 and 2008/09, real per capita consumer benefits from food subsidies rose by 96 percent in rural areas versus only 66 percent in urban areas (see table 3.1). The highest rate of increase in consumer benefits came in rural Upper Egypt, the poorest area of Egypt, where real per capita benefits increased by 105 percent.

Table 3.1: Urban and Rural Distribution of Real Per Capita Consumer subsidy Benefits,by Region, 2004/05 and 2008/09, (2004/05 prices=100)

(LE a person a year)

		Urban	Rural	Total	Urban to Rural
Metropolitan	2009	188.0		188.0	
	2005	116.5		116.5	
	Change (%)	61.4		61.4	
Lower Egypt	2009	201.2	161.3	171.9	1.2
	2005	118.7	86.5	95.6	1.4
	Change (%)	69.5	86.6	79.9	0.8
Upper Egypt	2009	206.9	199.5	201.7	1.0
	2005	122.0	97.0	105.0	1.3
	Change (%)	69.6	105.6	92.2	0.7
All Egypt	2009	197.1	178.7	186.3	1.1
	2005	118.6	90.9	102.9	1.3
	Change (%)	66.2	96.6	81.0	0.7

Source: Calculated by the authors, using CAPMAS' HIECS 2004/05 and 2008/09 data.

4. Household-Level Benefit Incidence of Food Subsidies

Baladi Bread and Wheat Flour

33. ***While baladi bread is purchased more in urban areas, baladi wheat flour is purchased mostly in Upper Egypt.*** As shown in table 4.1, annual per capita purchases of baladi bread are much higher in urban than in rural areas. On average, Egyptians spend five times as much on baladi bread as they do on other types of bread. On the other hand, annual per capita purchases of baladi wheat flour are the highest in Upper Egypt. This reflects both the presence of some geographical restrictions on the sale of baladi wheat flour in Egypt and the preference of consumers in Upper Egypt for baking their own bread.[25]

Table 4.1: Per Capita Purchases of Subsidized and Free Market Bread and Flour, by Region, 2008/09

	Expenditure LE/Person/Year				Quantity Kg/Person/Year			Number of loaves
	Subsidized baladi bread	Refined baladi bread	Whole wheat bread	Shamy bread	Subsidized baladi wheat flour	Free market flour	Maize	Subsidized baladi bread
Metropolitan	46.82	18.73	0.25	0.84	0.10	4.92	0.06	2.78
Lower Urban	51.39	10.09	0.06	0.52	0.11	4.62	0.70	2.56
Lower Rural	33.71	2.33	0.03	0.13	0.31	9.68	4.90	1.80
Upper Urban	48.44	14.32	0.03	0.10	15.38	6.96	0.43	2.47
Upper Rural	34.91	2.76	0.02	0.02	28.24	12.93	6.99	1.78
All Egypt	**40.10**	**7.51**	**0.07**	**0.27**	**9.87**	**8.88**	**3.56**	**2.14**

Source: Calculated by the authors, using CAPMAS' HIECS 2004/05 and 2008/09 data.

34. ***Most Egyptians buy baladi bread, with the share of people buying baladi bread not varying much by expenditure group***. The share of households purchasing baladi bread in Egypt has been rising over the years from 71.7 percent in 1997 (Akhter et al. 2001) to 75.9 percent in 2004/05 and 81 percent in 2008/09 (see table 4.2). This is true

[25] Purchases of subsidized baladi wheat flour are also high in border governorates (17.6 kg a person a year in urban areas and 51.6 kg a person a year in rural areas).

across all Egyptian regions, except for urban Lower Egypt, where this share has remained unchanged on average. Also, all rural regions generally have a lower percentage of households purchasing baladi bread (with the lowest, 74 percent, in rural Upper Egypt) compared with their urban counterparts (with the highest share, 89.5 percent, in urban Lower Egypt). Yet, the number of households purchasing baladi bread is 7 percent larger in rural areas than in urban areas. The share of households buying baladi bread does not vary much by expenditure group. In 2008/09 the share of households the bread in the lowest quintile (78 percent) was virtually identical to the share of households buying it in the top quintile (77.7 percent).

Table 4.2: Share of Households Purchasing Subsidized Baladi Bread by Region and Expenditure Quintile, 2004/05 and 2008/09 (percent of all households)

	2008 / 09					Average	2004 / 05					Average
	Poorest Q	2nd Q	3rd Q	4th Q	Richest Q		Poorest Q	2nd Q	3rd Q	4th Q	Richest Q	
Metropolitan	93.9	96.2	96.4	93.0	78.3	**85.3**	88.3	93.5	92.6	88.1	71.3	**79.7**
Lower Urban	91.0	94.1	94.4	94.0	83.0	**89.5**	93.0	93.3	92.0	92.6	85.7	**90.3**
Lower Rural	78.1	78.4	80.1	80.2	78.9	**79.4**	72.8	74.5	75.0	73.7	76.2	**74.5**
Upper Urban	89.2	87.4	91.6	87.4	71.9	**83.4**	81.9	81.8	84.0	84.5	69.1	**78.4**
Upper Rural	73.3	75.7	75.6	73.6	69.4	**74.0**	65.5	65.3	64.8	65.3	67.1	**65.5**
All Egypt	**78.0**	**81.0**	**83.8**	**84.9**	**77.7**	**81.0**	**71.7**	**75.8**	**78.2**	**79.7**	**73.8**	**75.9**

Source: Calculated by the authors, using CAPMAS' HIECS 2004/05 and 2008/09 data.

35. ***Households in Upper Egypt, especially in poor rural areas, are the main consumers of baladi wheat flour.***[26] As table 4.3 shows, less than 1 percent of households in areas outside of Upper Egypt were able to buy baladi wheat flour. However, in Upper Egypt large shares of households—14 percent of urban households and 32 percent of rural households—bought baladi wheat flour in 2008/09.[27] The availability of baladi wheat flour seems especially important to the poor in Upper Egypt. As shown in Table 4.3, the share of households in the lowest expenditure quintile buying baladi wheat flour in rural Upper Egypt is 1.6 times that for households in the top expenditure quintile, while the corresponding figure for baladi bread is only 0.5 (see table 4.2).[28] Poor rural households have time to bake and they are often located far from bakeries.[29] Consequently, wheat flour is much more important to the rural poor in Egypt than baladi bread.

Table 4.3: Share of Households Purchasing Baladi Wheat Flour, by Region and Expenditure Brackets 2008/09 (percent of all households)

[26] As the 2004/05 HIECS does not have data on subsidized wheat flour, comparison between 2008/09 and 2004/05 is not possible. Also, as the regions are defined differently in the corresponding table of Akhter et. al. 2001, regional comparison between 2008/09 and 1997 is not possible.
[27] These shares are even higher in border governorates (17.6 percent in urban areas and 38.3 percent in rural areas).
[28] For more on the importance of subsidized baladi wheat flour to the rural poor in Egypt, see Adams 2001.
[29] For more on the importance of subsidized baladi wheat flour to the rural poor in Egypt, see Adams 2001.

	2008/ 09					Average
	Poorest Q	2nd Q	3rd Q	4th Q	Richest Q	
Metropolitan	0.6	0.7	0.5	0.6	1.0	**0.8**
Lower Urban	2.0	0.9	0.8	0.7	0.3	**0.6**
Lower Rural	1.3	1.3	0.9	0.8	0.3	**0.9**
Upper Urban	23.5	21.8	16.8	12.3	5.2	**13.9**
Upper Rural	34.8	33.7	31.2	28.4	21.6	**31.8**
All Egypt	**23.4**	**15.2**	**9.4**	**6.3**	**3.1**	**9.9**

Source: Calculated by the authors, using CAPMAS' HIECS 2008/09 data.

36. ***Benefits to consumers from baladi bread increased between 2004/05 and 2008/09, but with evident urban bias.*** Table 4.4 shows that average per capita benefits to consumers from baladi bread increased by 49 percent between 2004/05 and 2008/09. In general, consumer benefits from baladi bread were higher in urban than rural areas, mainly because annual per capita purchases of baladi bread are much higher in urban than in rural areas. At the national level, rural consumers received about 30 percent less in per capita benefits from baladi bread than consumers in urban areas. Consumer benefits from baladi bread were also greater for higher expenditure groups. For example, Table 4.4 shows that at the national level per capita consumer benefits from baladi bread for the top expenditure quintile were about 1.3 times those for the poorest expenditure group.

Table 4.4: Per Capita Annual Real Consumer Benefits from Baladi Bread, by Region and Expenditure Quintile, 2008/09 and 2004/05 (2004/05 prices)

	2008 / 09					Average	2004 / 05					Average
	Poorest Q	2nd Q	3rd Q	4th Q	Richest Q		Poorest Q	2nd Q	3rd Q	4th Q	Richest Q	
Metropolitan	121	128	128	130	115	**122**	85.0	93.6	93.3	91.1	78.4	**85.3**
Lower Urban	103	123	131	135	127	**128**	79.1	78.5	80.9	84.9	86.6	**82.9**
Lower Rural	70	75	81	86	98	**81**	38.6	41.1	44.9	50.1	62.9	**45.9**
Upper Urban	114	118	126	132	115	**120**	87.4	87.2	93.3	94.9	80.5	**88.2**
Upper Rural	76	85	91	103	115	**85**	58.8	60.9	57.4	64.3	77.0	**60.8**
All Egypt	**84**	**93**	**101**	**113**	**115**	**101**	**59.1**	**60.4**	**64.0**	**72.6**	**77.5**	**66.7**

Source: Calculated by the authors, using CAPMAS' HIECS 2004/05 and 2008/09 data.

37. ***As expected, consumer benefits from baladi wheat flour are largest in Upper Egypt.*** In Egypt, consumer benefits from baladi wheat flour are quite small (see table 4.5). However, these benefits are significant in Upper Egypt, especially in rural areas, where they amount to LE 67.8 a person a year on average, or 2.7 percent of per capita consumption. These benefits are noticeably progressive only in urban areas of Upper Egypt.

Table 4.5: Per Capita Annual Current Consumer Benefits from Baladi Wheat Flour, by Region and Expenditure Quintile, 2008/09 (LE a person a year)

	2008 / 09					Average
	Poorest Q	2nd Q	3rd Q	4th Q	Richest Q	
Metropolitan	0.0	0.1	0.2	0.3	0.4	**0.3**
Lower Urban	1.0	0.2	0.3	0.3	0.1	**0.3**
Lower Rural	0.7	0.9	0.8	0.7	0.4	**0.8**
Upper Urban	53.5	50.1	39.2	30.8	15.4	**36.9**
Upper Rural	65.5	67.4	68.8	73.0	76.1	**67.8**
All Egypt	**45.0**	**29.8**	**19.2**	**13.6**	**7.7**	**23.1**

Source: Calculated by the authors, using CAPMAS' HIECS 2008/09 data.

38. ***Combining consumer benefits from baladi bread and baladi wheat flour gives more equitable distribution of subsidy benefits.*** Per capita benefits from baladi bread and baladi wheat flour are higher in urban and rural areas of Upper Egypt by 13.8 and 57.8 percent, respectively, than their corresponding areas in Lower Egypt (see table 4.6). Furthermore, metropolitan areas received almost 6 percent less than Lower Egypt. Also, there is no large difference among income groups. The lowest per capita benefits, received by the second quintile, was 7.5 percent less than the highest per capita benefits received by the fourth quintile.

Table 4.6: Per Capita Annual Current Consumer Benefits from Baladi Bread and Baladi Wheat Flour, by Region and Expenditure Quintile, 2008/09

(LE a person a year)

	2008 / 09					Average
	Poorest Q	2nd Q	3rd Q	4th Q	Richest Q	
Metropolitan	176.7	186.3	186.5	189.8	167.5	**177.5**
Lower Urban	151.9	180.9	192.9	197.8	186.5	**187.7**
Lower Rural	106.8	114.2	123.0	131.2	148.4	**123.6**
Upper Urban	220.9	222.7	223.8	224.8	183.5	**213.5**
Upper Rural	179.1	193.7	204.7	226.3	247.7	**195.1**
All Egypt	**168.0**	**164.7**	**166.1**	**178.1**	**175.6**	**170.5**

Source: Calculated by the authors, using CAPMAS' HIECS 2008/09 data.

Ration Card Food Items

39. ***The number of beneficiaries of the Egyptian ration card system increased significantly in 2008/09.*** The share of Egyptian households holding ration cards increased from 58.5 percent in 2004/05 to 67.6 percent in 2008/09 (see table 4.7). The increase was highest in rural areas, especially in Upper Egypt (11.7 percentage points), while metropolitan areas had the lowest increase (6.3 percentage points). Nationally, the share of households in the lowest expenditure quintile holding ration cards grew by 13.3 percentage points between 2004/05 and 2008/09, while the richest quintile grew by 8.5 percentage points. In terms of number of individual beneficiaries, the increase was even more significant as the opening of the system was mainly to the children of households that already hold ration cards. Table 4.8 shows that the number of beneficiaries increased

from almost 47 percent of the Egyptian population in 2004/05 to 64 percent in 2008/09. At the regional level, the increase in the share to the total cohort population was almost even in metropolitan and rural areas (18 and 19 percentage points, respectively), and lowest in urban Upper Egypt (10 percentage points). Within all income groups, the poorest two quintiles had the highest increase in the share to the total cohort population 21 and 18 percentage points). Yet, while 38 percent of the poorest two quintiles do not benefit from ration cards, two-thirds of the richest quintile has ration cards.

Table 4.7: Share of Households Holding Ration Cards, by Region and Expenditure Quintile (percent of all survey households)

	2008 / 09						2004 / 05					
	Poorest Q	2nd Q	3rd Q	4th Q	Richest Q	Average	Poorest Q	2nd Q	3rd Q	4th Q	Richest Q	Average
Metropolitan	51.7	52.5	53.1	53.6	49.1	**50.8**	46.5	50.6	47.7	49.8	41.0	**44.6**
Lower Urban	74.9	70.0	68.3	64.9	57.1	**63.5**	57.1	59.0	58.8	57.7	52.4	**56.3**
Lower Rural	79.7	78.0	78.2	77.7	75.3	**77.6**	65.2	66.8	70.0	69.5	66.0	**67.9**
Upper Urban	69.9	65.0	64.1	59.0	50.2	**59.6**	62.6	55.6	60.3	54.5	41.9	**52.3**
Upper Rural	78.4	76.3	74.5	72.1	71.0	**75.6**	63.6	64.0	63.4	66.3	62.2	**63.9**
All Egypt	**76.0**	**73.3**	**71.5**	**67.7**	**57.4**	**67.6**	**62.7**	**62.5**	**63.1**	**61.0**	**48.9**	**58.5**

Source: Calculated by the authors, using CAPMAS' HIECS 2004/05 and 2008/09 data.

Table 4.8: Share of Registered Members in the Ration Card Households, by Region and Expenditure Quintile (percent of all survey individuals)

	2008 / 09						2004 / 05					
	Poorest Q	2nd Q	3rd Q	4th Q	Richest Q	Average	Poorest Q	2nd Q	3rd Q	4th Q	Richest Q	Average
Metropolitan	45.7	48.1	52.2	56.3	61.3	**56.9**	31.5	35.7	37.7	41.2	39.7	**38.9**
Lower Urban	56.4	58.7	59.4	59.2	59.2	**59.0**	37.2	40.4	43.0	46.2	51.5	**45.0**
Lower Rural	60.1	63.6	66.9	74.8	85.3	**69.2**	39.7	43.9	50.5	58.3	68.4	**50.6**
Upper Urban	57.8	58.8	58.2	57.9	54.4	**57.3**	41.3	42.6	50.3	52.4	45.1	**46.4**
Upper Rural	62.1	67.3	70.2	76.6	88.0	**67.5**	39.1	48.4	55.0	66.8	77.4	**49.4**
All Egypt	**60.3**	**63.0**	**64.1**	**66.5**	**66.0**	**64.0**	**39.1**	**44.1**	**48.6**	**52.8**	**49.5**	**46.8**

Source: Calculated by the authors, using CAPMAS' HIECS 2004/05 and 2008/09 data.

40. ***Two limitations are important to note.*** First, differences in the results between shares to all households and shares to total population may be explained by the larger size of rural, Upper Egyptian, and poor households, increasing the number of members registered in the ration card system (see table 4.9). Second, the numbers of beneficiaries as calculated from the two HIECSs are much lower than those obtained from GASC. GASC data show that the share of ration card beneficiaries to the total population increased from 55.4 to 79.1 percent of the population in 2004/05.[30] We believe that with all possible statistical errors, the difference cannot be justified without mentioning the likelihood of double registration of some households and registration of households who

[30] These shares are calculated based on CAPMAS estimates of the Egyptian population in the country of 71.2 million in 2004/05 and 79.9 million in 2008/09.

do not use their cards (whether because of bad quality issue, long distance to *tamween* grocery, difficulty of use, and so on).

Table 4.9: Number of Registered Members in the Ration Card Households, by Region and Expenditure Quintile (percent of all survey individuals)

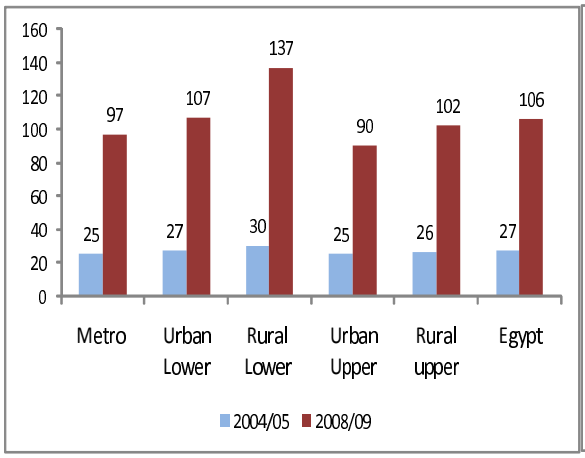
	2008 / 09						2004 / 05					
	Poorest Q	2nd Q	3rd Q	4th Q	Richest Q	Average	Poorest Q	2nd Q	3rd Q	4th Q	Richest Q	Average
Metropolitan	5.0	4.6	4.5	4.3	3.8	**4.1**	3.7	3.9	3.8	3.6	3.3	**3.5**
Lower Urban	4.6	4.7	4.4	4.2	3.6	**4.1**	3.7	3.5	3.4	3.3	3.1	**3.3**
Lower Rural	5.0	4.7	4.4	4.1	3.5	**4.3**	3.7	3.5	3.4	3.4	3.0	**3.4**
Upper Urban	5.2	4.9	4.4	4.2	3.8	**4.4**	3.9	3.9	3.9	3.9	3.4	**3.8**
Upper Rural	5.5	5.1	4.7	4.2	3.7	**4.9**	3.6	3.8	3.8	3.6	3.3	**3.7**
All Egypt	**5.4**	**4.5**	**4.6**	**4.0**	**3.4**	**3.9**	**3.3**	**2.9**	**2.6**	**3.0**	**3.2**	**3.0**

Source: Calculated by the authors, using CAPMAS' HIECS 2004/05 and 2008/09 data.

41. ***Benefits to consumers from ration card items increased between 2004/05, but with persistent rural bias, unlike baladi bread subsidy benefits.*** Figure 4.1 shows that Egyptians received LE 106 a person a year on average from ration card foods, or 2.7 times what they used to receive in 2004/05 in real terms.[31] Half of this increase is explained by the increase in benefits received from cooking oil (3.4 times the level in 2004/05, in real terms).[32] This is due to increases in quantity quotas (see annex box 1) and, more important, the increase in the number of individuals benefiting from ration cards (see table 4.7). There were also leaps in market prices of food commodities in 2008/09 (see consumer-benefit subsidy ratios in table 2.3). As opposed to baladi bread, per capita consumer benefits for ration cards were higher in rural areas than in their urban counterparts, with rural Lower Egypt receiving the highest per capita annual benefits from these subsidies (LE 137). In general, higher shares of households holding ration cards (see table 4.6) account for the higher per capita subsidy benefits. Higher expenditure groups receive, on average, 20 percent higher consumer benefits from ration cards than lower expenditure groups. The gap between the richest and poorest per capita consumer benefits was highest in rural areas, especially in Lower Egypt (more than the double), but there was relatively narrowing between 2004/05 and 2008/09 across all regions, except for urban Upper Egypt (see annex table 35).

Figure 4.1: Nominal Per Capita Consumer Benefits from Ration Card Foods, by Region and Expenditure Quintile (LE a person a year)

[31] Real values of consumer benefits are calculated using regional consumer price indices rather than the price index of the specific commodity under analysis.
[32] For more details, see annex table 35.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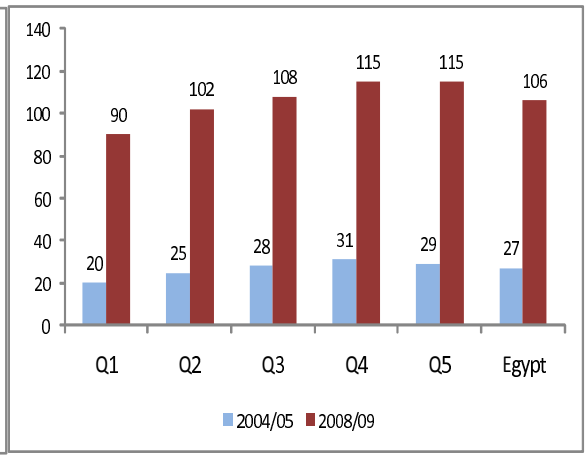
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Figure 4.2: Per Capita Consumer Benefits, by Subsidized Commodity, 2004/05 and 2008/09

(LE a person a year)

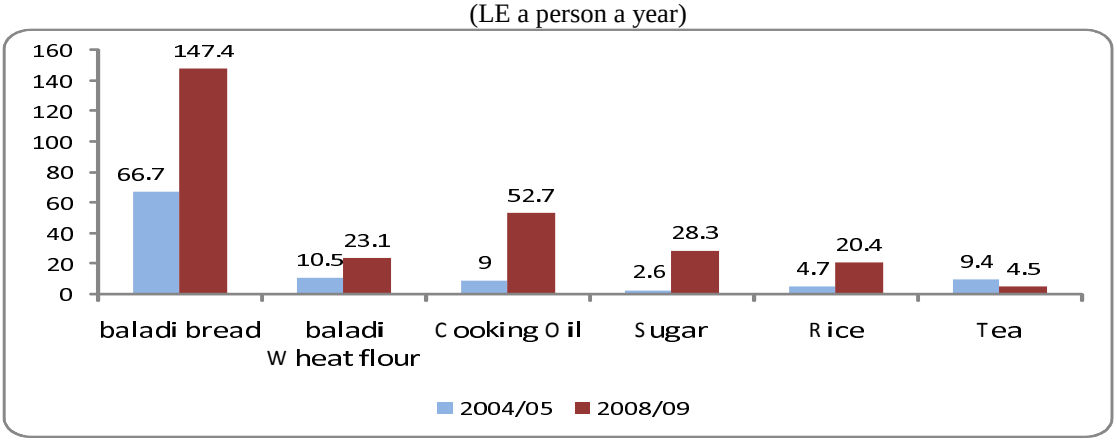


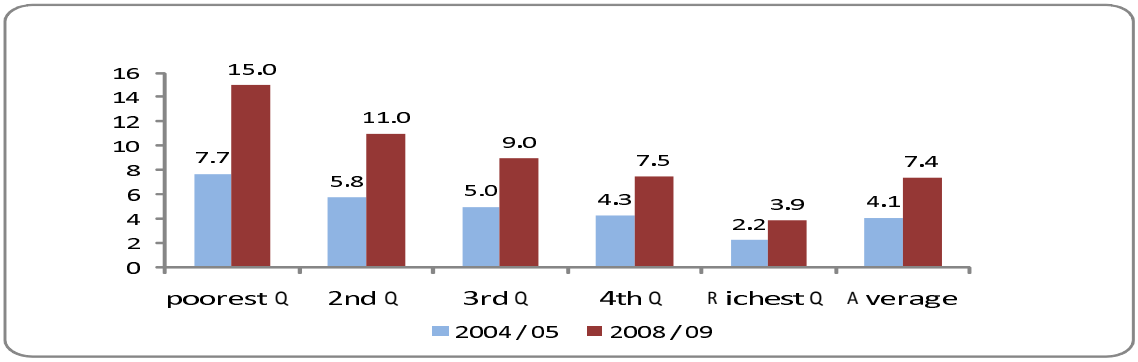
Table 4.10: Share of Subsidized Food to its Total Market Purchases, 2008/09 (percent)

	Metropolitan	Lower Urban	Lower Rural	Upper Urban	Upper Rural	All Egypt
Cooking oil	50.7	58.9	72.1	58.3	74.0	63.8
Rationed sugar	49.7	57.3	69.0	52.7	58.3	59.0
Rationed rice	36.5	26.3	26.0	50.4	66.5	32.1
Rationed tea	24.2	32.2	24.8	21.8	33.0	27.2
Baladi wheat flour	2.7	2.4	3.1	69.5	68.9	52.9

Source: Calculated by the authors, using CAPMAS' HIECS 2008/09 data.

44. ***The share of subsidy benefits to total consumption declines monotonically with income.*** In higher expenditure groups, the share of per capita food subsidy benefits to consumption declines monotonically with level of expenditure. This implies that consumer benefits from food subsidies are more important to poor households than to rich, because they represent a larger share of consumption for the poor. At the national level, food subsidies as a percent of consumption decline monotonically from 15 percent for the poorest quintile to 3.9 percent for the richest quintile (see fig. 4.3). Food subsidies as a percent of consumption also decline monotonically for all Egypt's regions.

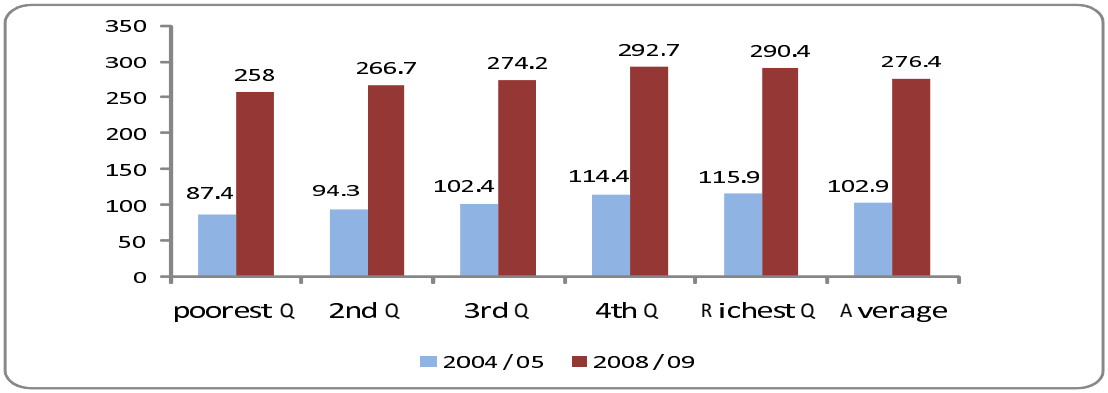
Figure 4.3: Shares of Food Subsidies to Total Consumption, by Quintile, 2004/05 and 2008/09



subsidy items, than received by the poorest group (see fig. 4.6). The only subsidized food that is progressive is baladi wheat flour, which provides 5.8 times the share of benefits to the poorest expenditure group as it does to the richest. At the national level, there is no other subsidized food that provides anywhere near this share of benefits to the poor. This regressive pattern does not change much if we consider the benefits received by the richest 40 percent of the population versus the benefits received by the poorest 40 percent.

Figure 4.4: Per Capita Subsidies Consumer Benefits, by Quintiles 2004/05 and 2008/09

LE/Person/Year



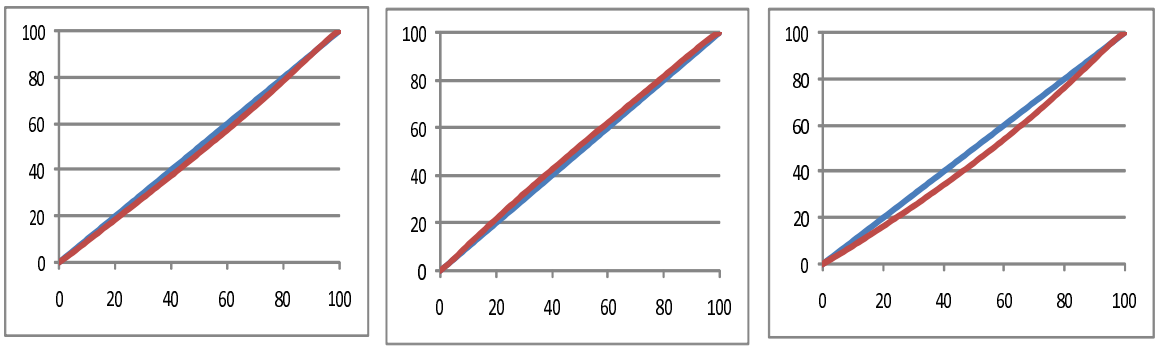
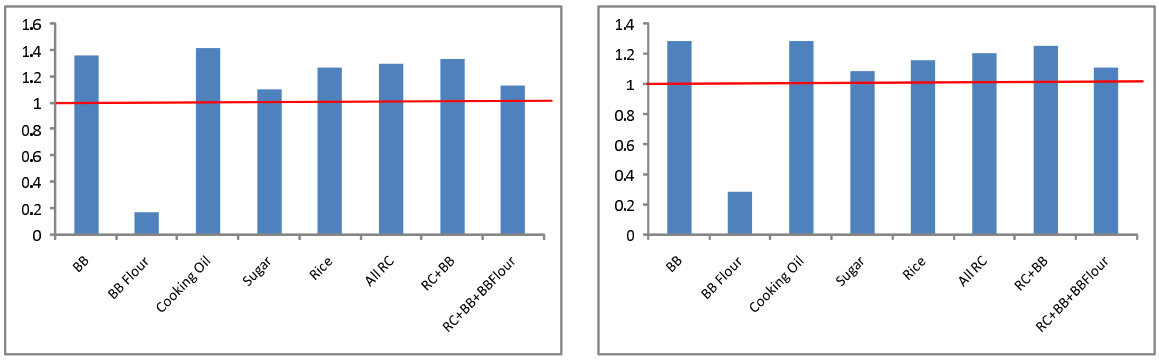


Figure 4.6: Ratio of Consumer Benefits of Richest to Poorest, by Subsidy Food Commodity, 2008/09

a) Richest quintile to poorest quintile *b) Richest 40 percent to poorest 40 percent*

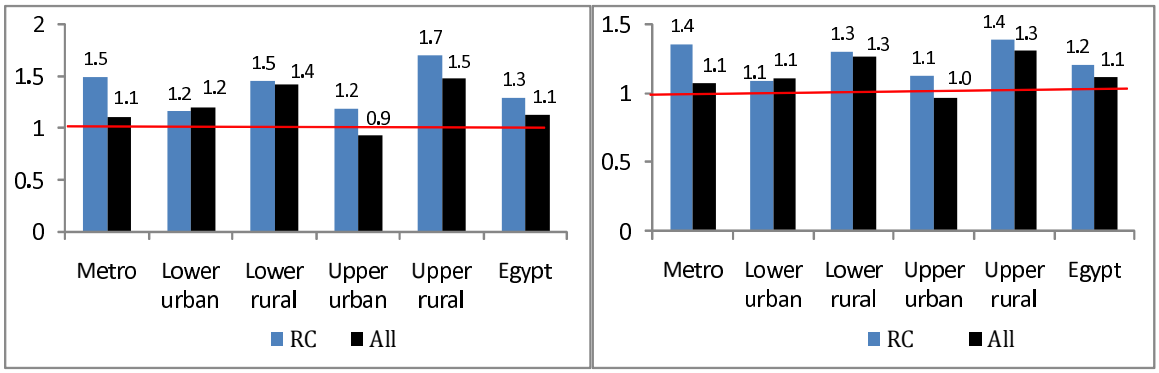


Source: Calculated by World Bank staff from HIECS 2008/09.

46. ***This regressive pattern of consumer benefits from all food subsidies prevails for all regions of Egypt except urban Upper Egypt.*** Per capita consumer benefits from all food subsidies are most regressive in rural areas, especially in Upper Egypt. The richest quintile in rural Upper Egypt receives about 48 percent more in per capita absolute benefits than the poorest group (see fig. 4.7). Meanwhile, urban Upper Egypt is the only region exhibiting progressive distribution of consumer subsidy benefits. The poorest quintile received 8 percent more benefits than the richest quintile, in per capita terms. This was exclusively driven by the progressiveness of the consumer benefits from baladi bread wheat flour, as the poorest quintile receives 17 percent more than the richest quintile from this subsidy food benefits, in per capita terms (see annex table 35). Benefits from baladi bread were slightly progressive in metropolitan areas, with the poorest quintile receiving 4.5 percent more than the richest quintile. Compared with 2004/05, the large benefit gap between the rich and the poor in rural Upper Egypt from food subsidies has narrowed only slightly (see annex table 35). These findings suggest that the portion of Egyptian food subsidies currently being spent on transfers to wealthier Egyptians is large enough to improve the lower income groups standards of living if the subsidy system could be better targeted.

Figure 4.7: Ratio of Shares of Per Capital Consumer Benefits, for All Ration Card Items and All Food Subsidy Items, by Region, 2008/09

a) Richest quintile to poorest quintile *b) Richest 40 percent to poorest 40 percent*



Source: Calculated by authors, using CAPMAS' HIECS 2008/09 data.

47. ***Total consumer benefits from food subsidies have increased considerably in recent years.*** Between 2004/05 and 2008/09, per capita consumer benefits from all food subsidies have increased at the national level by much more (168.6 percent) than the increase in per capita consumption (46.7 percent). In 2008/09, per capita consumer benefits from all subsidies reached LE 276 a year, or 7.4 percent of per capita consumption, up from 4.1 percent in 2004/05. On average, a person in the lowest quintile group received LE 258 a year in 2008/09, accounting for 15 percent of his or her consumption expenditure (see annex table 35).

48. ***The poverty-reduction impact of food subsidies is important.*** While food subsidies provide only a small proportion of per capita consumption in Egypt, they have an important positive impact on poverty. Our calculations suggest that in 2008/09 food subsidies lifted about 9 percent of the Egyptian population out of poverty. If there were no food subsidies, the incidence of poverty in Egypt would increase from 20 percent to 30 percent. Since baladi bread is the most important subsidized food, it accounts for most of the poverty-reduction impact. According to 2008/09 prices, if the subsidy on baladi bread were eliminated, the consumption of poor households would decline by 6 percent. If all food subsidies were eliminated, the consumption of poor households would fall by 12.7 percent, and these households would need to be compensated LE 22 a month per person (in 2008/09 prices) to make up the difference (see annex table 41).

5. System Leakages and Potential Cost Savings

49. The cost effectiveness of poverty-oriented social programs can be significantly increased by limiting leakage and improving targeting. This section estimates the magnitude of leakage in food subsidies, examines its evolution over the period 2004/05 and 2008/09 that witnessed various changes in the system, and calculates the potential cost savings from alternative scenarios of targeting.

System Leakages

50. ***System leakage is the amount of subsidized foods that does not reach intended consumers.*** One of the first steps in evaluating the performance of any social program is to identify the size of leakage. Subsidies usually create a strong incentive for agents to leak goods to parallel markets. The larger the difference between the regulated price and the market price, the higher the incentive to leak. Thus, leakages in our report are defined

as the diversion of subsidized foods away from the intended uses. Some examples of the system leakage are the use of the subsidized wheat flour by licensed baladi bread bakeries to produce baked foods other than subsidized baladi bread, the selling of this wheat in the parallel market, the selling of unsold subsidized bread as animal feed, and all the possible losses in the wheat and wheat flour throughout the different parts of the baladi bread supply chain (storage, transportation, milling, etc..). The same can be said about the selling of ration-card foods to non-eligible beneficiaries (whether by selling extra quantities to ration cards' holders or by selling ration-cards foods to non entitled households). In this report, the magnitude of leakage is calculated as the difference between the quantities of government-supplied subsidized food items (baladi bread, wheat flour, sugar, cooking oil and rice; data derived from MOSS or GASC[35]) and the quantities purchased and consumed by consumers (information available from the HIECS).[36] As comparison is made in terms of per capita quantities, estimates of per capita supplied quantities are sensitive to the estimate used for population.[37] It is also important to note that estimates of leakage do not differentiate between urban and rural areas, as the information provided by MOSS and GASC are at the governorate level with no distinction between urban and rural areas. As people may be commuting between urban and rural areas for employment or trade, it is difficult to assign all of their consumption expenditure (particularly on baladi bread) to one particular area. Although estimates of border governorates are available, the focus in the analysis is on the other three Egyptian regions, namely Metropolitan, Lower Egypt, and Upper Egypt.

51. ***System leakages of baladi bread are sizable, but have declined over time.*** At the national level, the leakage is estimated at 31 percent of the quantities of wheat flour supplied to bakeries (see fig. 5.1.a). The leakage was by far highest in Metropolitan areas (43 percent), although it was below the national average in Lower and Upper Egypt (27 percent in both). This may be due to the existence of more sources of demand on wheat flour in Metropolitan Egypt, increasing lucrative incentives for selling it in the black market. Yet, compared with 2004/05 estimates, a significant decline in the leakage is evident across all regions, especially in Lower Egypt. On average, the system leakage in baladi bread went down by 10 percentage points between 2004/05 and 2008/09, although the profit margins of selling wheat flour in the black market were by far higher in 2008/09 with the international commodity price crisis. Therefore, although analysis over the longer term will clarify these results, the large reductions in the amount of leakage seem to be the direct result of the measures undertaken by GoE to improve the efficiency of baladi bread subsidies, such as the concentration of the sale of baladi wheat flour in Upper Egypt and the Border governorates and the separation of production and

[35] GASC, affiliated with the Ministry of Trade and Industry, is responsible for procurement and costing of subsidized commodities, and the Distribution Department at MOSS is responsible for the distribution of these items quotas in all Egypt's governorates.

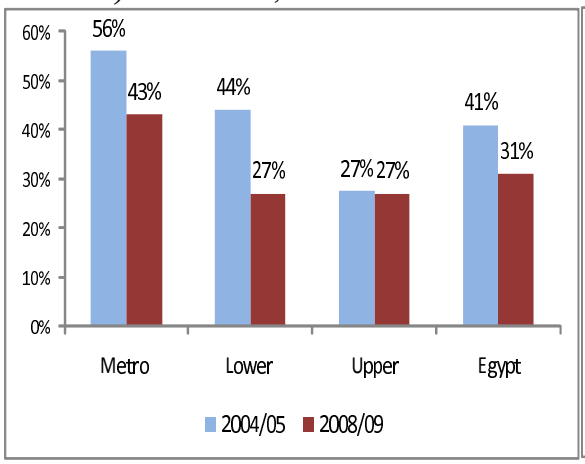
[36] It is worth to mention that the data of a recent survey conducted by the Information Decision and Support Center (IDSC) in 2009 for the World Bank, (2010a) show that only 5 percent of the surveyed households do not fully consume their purchases of baladi bread. The data also reveals that the bad quality is the main reason (78 percent on average) for not consuming some of the purchased baladi bread, and that this non-consumed baladi bread is mainly used as animal feed.

[37] The total population is estimated at 70 million in 2004/05 and 75.4 million in 2008/09.

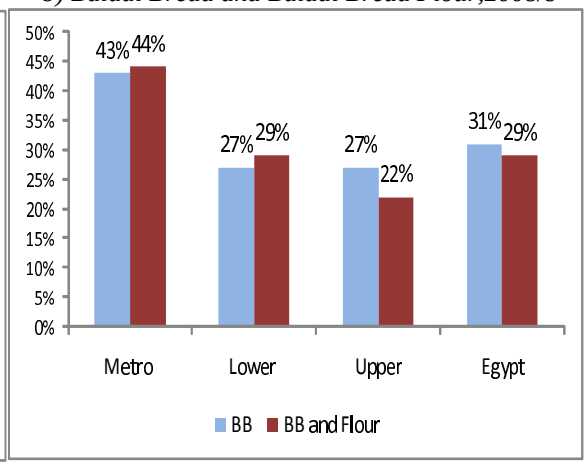
distribution of baladi bread. Had the international prices not increased, the leakages could have declined even further.[38]

Figure 5.1: System Leakage in Baladi Bread and Baladi Bread Flour Subsidies

a) Baladi Bread, 2004/5 and 2008/09



b) Baladi Bread and Baladi Bread Flour,2008/9



52. ***Although leakages are much lower for directly consumed baladi wheat flour, those for the overall system of baladi wheat flour are almost as high as those for baladi bread.*** At the national level, the leakage in the wheat flour supplied to warehouses for direct consumption is estimated at 13 percent in 2008/09 (see fig. 5.1.b). There is no corresponding figure for 2004/05 because the consumption of wheat flour was introduced in the HIECS questionnaire only in 2008/09, making an assessment of the progress in the leakage system over time impossible. Also, the regional leakage estimates of this system do not seem reasonable, except for Upper Egypt (7.7 percent). In Metropolitan and Lower Egypt areas, the supplied amounts and consumption are very small and leakage ratios are unduly too high because of small bases. The overall leakage in the quantities of baladi wheat flour, whether supplied to bakeries or to warehouses for direct consumption, is estimated at 29 percent. The regional pattern of the overall leakage system is almost the same as that of the baladi bread subsidies, with quite a smaller leakage ratio in Upper Egypt.

53. ***Leakages of basic ration card foods have increased at the national level, despite improvements in Metropolitan Egypt.*** Table 5.1 shows that at the national level, rates of leakage for ration card foods either remained unchanged (rice) or increased (cooking oil and to a lesser extent sugar). However, the leakage rates for all three of these subsidized foods have fallen sharply in Metropolitan Egypt. For example, leakage rates fell in Metropolitan Egypt by 3.3 percentage points for sugar, 11.8 percentage points for cooking oil, and 6.9 percentage points for rice. Performance of food subsidy appropriation in Upper Egypt deteriorated as leakage rates for sugar fell by only 0.7 percentage points and leakages for cooking oil and rice increased sharply (13.9 and 10.6 percentage points, respectively).

Table 5.1: System Leakages in Ration Card Foods, by Region, 2004/05 and 2008/09

	Oil		Sugar		Rice	
	2008/09	**2004/05**	**2008/09**	**2004/05**	**2008/09**	**2004/05**
Metropolitan	24.4	36.2	26	29.3	13.7	20.6
Lower Egypt	28.1	23.6	20.6	14.3	3.2	7.5
Upper Egypt	38.9	25	17.3	18.6	22.1	11.5
All Egypt	**31.4**	**26.7**	**20**	**18.7**	**11.4**	**11.3**

Source: Calculated by the authors, using CAPMAS' HIECS 2004/05 and 2008/09 data, and GASC data.

Box 5.1: DATA AND METHODOLOGY

1. The main goal of this study is to estimate the cost of delivering LE 1 of food subsidy benefits to consumers. To achieve this goal, we should first estimate system leakage—the amount allocated to subsidies that does not reach the intended final consumer. This is calculated as the difference between the quantities of subsidized foods as supplied by GASC to bakeries, baladi wheat flour warehouses, or *tamween* groceries and the quantities of these foods as estimated in the HIECS data. The financial cost to GASC is then calculated using the subsidy ratio of the relevant subsidy food. Finally, the cost of delivering LE 1 of food subsidy benefits is calculated as the quotient of subsidy cost and benefits received by consumers.

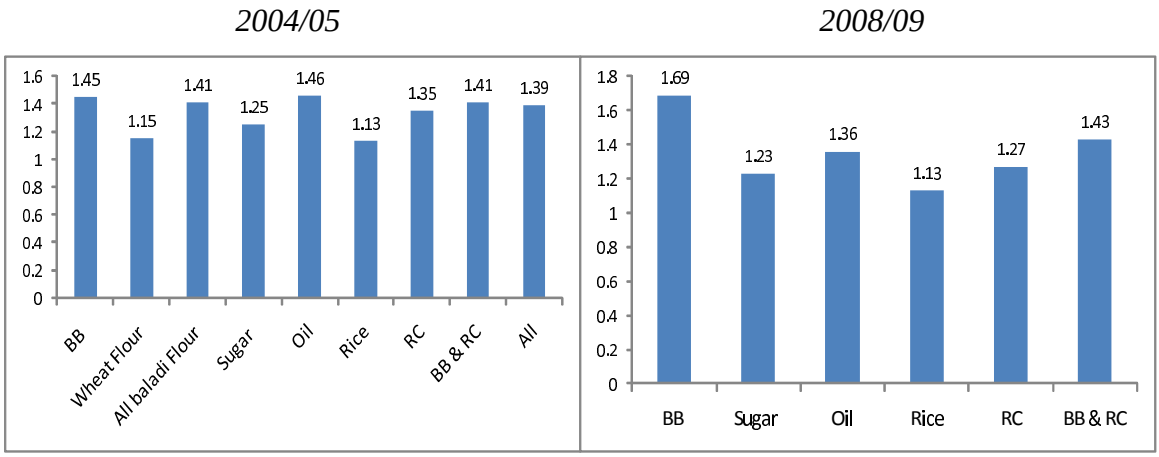
2. At the outset, it is important to identify who is benefiting from food subsidies. As mentioned above, Egyptian food subsidies is not meant to target any specific groups, yet it is important to examine the potential savings from different targeting scenarios. In any society, there should be some specific groups that social policies target. One criterion to use in determining these groups is income or consumption expenditure as proxy for income. The present study will estimate the potential savings in two targeting scenarios. The government is assumed to target the poorest 40 percent of the population in the first scenario, and the poorest 60 percent in the second. The first scenario targets almost all Egyptian poor and near-poor.[1] According to the latest 2008/09 HIECS data, the poor constitute 22 percent of the Egyptian population, but there is another 19 percent who are near-poor (i.e., vulnerable or potentially poor). By adding another 20 percent of the population in the second scenario, we ensure that food subsidies cover poor, near-poor and the lower middle-income groups in the country.

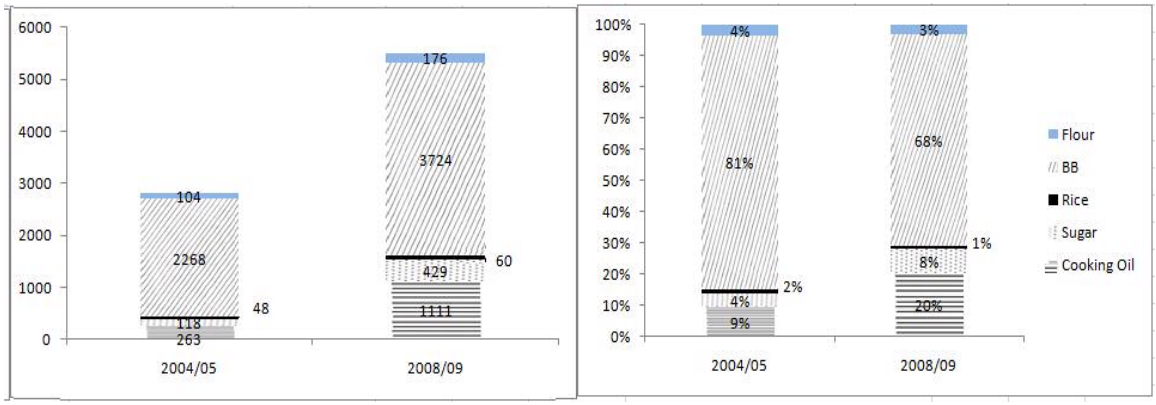
3. The analysis in this study is based primarily on two main data sources: (1) official government data from GASC and the MOSS, to highlight the supply-side dimension of food subsidies; and (2) household data from the 2004/05 and 2008/09 HIECSs, to capture the demand dimension of food subsidies. However, the data availability limitations preclude the possibility of distinguishing the system leakage and thereby the cost of delivering LE 1 of basic quotas for sugar and cooking oil from those of additional quotas as HIECS data do not make such distinction. Besides, it was not possible to estimate the system leakage of food subsidies at the governorate level with the distinction between rural and urban areas since GASC data do not provide information at this geographical disaggregation level. Finally, tea was excluded from the analysis, because tea subsidies were too small in 2008/09 (see table 2.3).

4. The sample designs of both of the HIECSs used in this study are nationally representative. The size of 2004/05 and 2008/09 HIECSs are large enough (almost 48,000 households) to allow for inferences at the regional and governorate levels. However, since sample sizes are small for the border governorates,[2] they are not included in the analysis but all the data are shown in the Annex tables. In comparing HIECS results with those of Akhter et al. (2001), the sample size for the latter was much smaller (only 2,500 households), making the results of HIECS and International Food Policy Research Institute surveys not strictly comparable. Nonetheless, comparison will be made whenever relevant.

54. ***In 2008/09, the cost of delivering LE 1 of food subsidies to intended consumers was almost the same as in 2004/05.*** The leakage in overall food subsidies is estimated at 28 percent, resulting in a cost of LE 1.39 to deliver LE 1 of a basket of subsidized foods (see fig. 5.2). As expected, this cost is highest for cooking oil (LE 1.46) and baladi bread (LE 1.45), and lowest for rice (LE 1.13) and wheat flour (LE 1.15). Sugar is an intermediate performer in terms of the cost of delivering LE 1 of subsidies to consumers. Between 2004/05 and 2008/09, the increase in the cost of delivering LE 1 of the ration card foods (from LE 1.27 to LE 1.35) has almost offset the improvement in the cost of delivering LE 1 of baladi bread to all consumers (from LE 1.69 to LE 1.45).

Figure 5.2: Cost Effectiveness of Egypt's Food Subsidies, by Food Item





Source: Calculated by the authors, using CAPMAS' HIECS 2004/05 and 2008/09 data, and GASC data.

Other Potential Cost Savings

56. ***Not only is better targeting a cost-saving measure, it also helps reducing poverty.*** According to one recent study, a set of "perfectly targeted" social programs (i.e. programs whose benefits reach all the poor and only the poor) could eliminate poverty at less than 10 percent the cost of those programs that do not differentiate between the rich and poor.[39] Of course, in the real world few, if any, social programs are able to target "all the poor and only the poor." Nevertheless, it is important to improve the targeting of poverty-oriented social programs. Although the Egyptian food subsidy program was never designed to target specific income groups, it is still useful to examine its impact if all the poor benefit from this system, and how much the system can save if specific income groups are targeted.

57. ***For Egypt as a whole, errors of exclusion are lowest for baladi bread and highest for baladi wheat flour.*** In practice, social support programs do not cover all needy persons (regardless of the definition of needy in a given society). The ratio of those needy to total needy is a measure of committing the error of exclusion. The smaller the error of exclusion, the better targeting the program is perceived. As indicated in Table 5.2, almost 21 percent of the poor do not benefit from the subsidy on baladi bread, 80 percent do not receive baladi wheat flour subsidy benefits, and 27 percent are not covered by the ration cards. Among Egypt's regions, the error of exclusion is highest for all subsidized foods—except baladi—in Metropolitan Egypt and lowest for most subsidized foods in rural Upper Egypt. Between 2004/05 and 2008/09, the error of exclusion fell significantly for all subsidized foods (ranging between 8 percentage points for cooking oil and 3.6 percentage points for rice).

Table 5.2: Errors of Exclusion, by Region and Subsidized Commodity, 2008/09 (percent)

[39] Ravallion and Chen, 1997.

	(Percent)						Change from 2004/05 (percentage points)			
	Baladi bread	Baladi wheat flour	Bread and Wheat	Cooking oil	Sugar	Rice	Baladi bread	Cooking oil	Sugar	Rice
Metropolitan	5.3	99.3	5.3	46.5	46.4	48.9	-1.9	-4.8	-4.0	-2.0
Urban Lower Egypt	7.7	98.6	7.5	29.2	28.9	37.6	0.6	-10.2	-10.5	-3.0
Rural Lower Egypt	22.5	98.6	22.1	22.7	21.7	34.5	-4.5	-8.0	-8.6	1.0
Urban Upper Egypt	12.2	75.0	5.0	34.0	34.8	35.3	-6.2	-4.1	-3.0	-2.9
Rural Upper Egypt	25.4	64.0	10.7	24.2	25.3	26.1	-9.2	-8.7	-6.4	-6.5
All Egypt	20.9	79.5	12.8	26.5	26.8	31.7	-5.7	-8.0	-7.0	-3.6

Source: Calculated by the authors, using CAPMAS' HIECS 2004/05 and 2008/09 data.

58. ***To reach all the poor with food subsidy benefits without incurring a higher fiscal burden, some cost savings are possible if the system targets only lower income groups.*** The Egyptian system was never meant to tightly target lower income groups. But, there has been public debate about how to rationalize food subsidies and one of the incontrovertible recommendations is to better target subsidies. Cost savings from better targeting are examined here under two scenarios: one that is moderately tightened as it excludes the richest 40 percent of the population, while the more tightened option excludes the richest 60 percent of the population.

59. ***The potential cost savings of excluding the richest groups from food subsidies is estimated at 30 percent of subsidies, at least.*** If the system had excluded the richest 40 percent of the population from the food subsidy benefits coverage in 2008/09, LE 6.0 billion (30.5 percent of food subsidies and 0.57 percent of GDP) could have been saved (see table 5.3). Excluding the richest 60 percent of the population would have been more cost-saving, estimated at LE 8.8 billion (44.7 percent of food subsidies and 0.84 percent of GDP). The second scenario implies almost one-third more savings than the first scenario, with the relative contribution of different subsidized foods to cost savings remaining almost unchanged.

Table 5.3: Estimates of Cost Savings: Two Targeting Scenarios, 2008/09

	Bread and wheat flour	Sugar	Oil	Rice	Ration Cards	All
Subsidies (LE billion)	**13.34**	**2.15**	**3.54**	**0.56**	**6.25**	**19.58**
Potential Savings						
targeting poorest 40% of the population	5.80	1.07	1.59	0.31	2.96	8.76
targeting poorest 60% of the population	3.95	0.71	1.09	0.21	2.01	5.96
Shares of total subsidies (%)						
Potential Savings						
targeting poorest 40% of the population	29.4	5.4	8.1	1.6	15.1	44.7
targeting poorest 60% of the population	20.2	3.6	5.6	1.1	10.3	30.5
Shares of potential cost savings (%)						
targeting poorest 40% of the population	66.2	12.2	18.1	3.6	33.8	
targeting poorest 60% of the population	66.3	11.9	18.3	3.6	33.7	
Shares of GDP (%)						
Subsidies	1.3	0.2	0.3	0.1	0.6	1.9
Potential Savings						
targeting poorest 40% of the population	0.56	0.10	0.15	0.03	0.29	0.84
targeting poorest 60% of the population	0.38	0.07	0.10	0.02	0.19	0.19

Source: Calculated by the authors, using CAPMAS HIECS 2008/09 and GASC data.

60. ***Reducing leakages to acceptable levels and excluding the richest income groups could save between 40 percent and 55 percent of food subsidies.*** Because it is almost impossible to completely eliminate leakages, we examine the combined cost-saving effects of reducing the system leakage to 10 percent and better targeting in the two scenarios mentioned above. The overall cost savings would range between LE 9.5 billion (48.6 percent of subsidies) and LE 12.3 billion (62.8 percent of subsidies). These amounts, if evenly redistributed among the bottom quintiles in 2008/09, could have produced additional per capita benefits of LE 210 a year when excluding the richest 40 percent and LE 407 a year when excluding the richest 60 percent.

6. Conclusion and policy options

61. ***The objective of this study is to underscore the need for improving the different components of Egypt's food subsidies.*** To reach this objective, the study examines the distribution of subsidy benefits of subsidized baladi bread, baladi wheat flour, cooking oil, sugar, and rice; and estimates their system leakage as well as the scope of savings if the untargeted nature of the existing system is changed. The exclusion of the richest 40 percent allows targeting almost all Egyptian poor and near-poor, while the exclusion of the richest 60 percent also will cover in addition lower middle-income groups. In the following the most important findings are highlighted and a set of policy options are suggested.

Most important findings

62. ***The pattern of food subsidy allocation by population share or by poverty share still favors Cairo.*** The results suggest that the bias in the distribution of food subsidies towards Cairo Governorate is much stronger by poverty share than by population share. Moreover, the five Upper Egyptian governorates with the largest shares of poor people—Asyut, Sohag, Minya, Qena, and Beni Suef—all received much less in food subsidies than could be expected. Yet, this bias in the distribution to Cairo has decreased a bit over time. This could be the result of increasing efforts towards the geographic targeting of food subsidies in Egypt as a whole.

63. ***The most important subsidized food item is baladi bread, which, together with baladi wheat flour, is relatively equitably distributed.*** Baladi bread and baladi wheat flour subsidies account for 68 percent of food subsidies, of which baladi bread subsidies are 90 percent. More than 80 percent of Egyptians buy baladi bread, with the share of people buying baladi bread not varying much by expenditure group. While baladi bread is purchased more in urban areas, baladi wheat flour is purchased mostly in Upper Egypt, especially in rural areas. Combining consumer benefits from baladi bread and baladi wheat flour gives a more equitable distribution of subsidy benefits, as they were highest in Upper Egypt, and their discrepancy across income groups was not significant.

64. ***Benefits to consumers from ration card items increased between 2004/05 and 2008/09 but with a persistent rural bias.*** Half this increase is explained by the increase in benefits received from cooking oil. This is due to increases in quantity of quotas and, more important, the increase in the number of individuals benefiting from ration cards, estimated at 68 percent of the Egyptian population in the HIECS 2008/09. Higher expenditure groups receive on average 20 percent higher consumer benefits from ration cards than lower expenditure groups. The gap between the richest and poorest per capita consumer benefits was highest in rural areas, especially in Lower Egypt, though relatively narrowing between 2004/05 and 2008/09 across all regions, except for urban Upper Egypt.

65. ***With the exception of baladi wheat flour, Egypt's food subsidies are regressive.*** Per capita absolute consumer benefits from all food subsidies tend to increase with expenditure quintile, with the richest quintile receiving about 12.6 percent more from food subsidies than the poorest quintile. The only subsidized food that is progressive is baladi wheat flour, which provides 5.8 times the share of benefits to the poorest expenditure group as it does to the richest. At the national level, there is no other subsidized food that provides anywhere near this share of benefits to the poor.

66. ***At the national level, system leakage of Egypt's food subsidies is high, estimated at LE 5.5 billion, or 28 percent of total food subsidies.*** At the national level, leakages for baladi bread were estimated at LE 3.7 billion in 2008/09, or 31 percent of the 82 percent extraction-wheat flour subsidies, down from 41 percent in 2004/05. Lower Egypt had the strongest improvement in the system leakage over the same period, Metropolitan Egypt continued to have the highest leakage ratio, and leakage performance did not change in Upper Egypt. In contrast, baladi wheat flour for direct consumption, which represents 10 percent of Egypt's wheat flour, had a leakage of 13 percent on average, with Upper Egypt having only 7.7 percent leakage. As to the overall ration card system, its leakage is estimated at LE 1.6 billion in 2008/09, or 26 percent of the ration card subsidies, up from 21 percent in 2004/05. The increase in the leakage ratio is driven by cooking oil and to a

lesser extent sugar, as the leakage ratio of subsidized rice remained unchanged. While leakage ratios for all the three ration card items have fallen sharply in Metropolitan, they increased significantly for cooking oil and rice in Upper Egypt.

67. ***In 2008/09, the cost of delivering LE 1 of all food subsidies to intended consumers was LE 1.39 on average.*** Estimates of the cost of delivering LE 1 of subsidies for each of the subsidized foods in 2008/09 indicate that the most cost-effective consumer delivery was rice (LE 1.13) and wheat flour for direct consumption (LE 1.15), and the least cost-effective was cooking oil (LE 1.46) and baladi bread (LE 1.45). Sugar was an intermediate performer in terms of cost effectiveness (LE 1.25). The cost of delivering LE 1 of baladi bread and baladi wheat flour to all intended consumers is estimated at LE 1.41 compared with LE 1.35 for all ration card foods.

68. ***There are significant potential savings from targeting.*** The amount of cost savings depends on the size of the target group. The larger the target group, the lower the cost savings. Accordingly, the potential cost savings range between LE 6 billion and LE 8.8 billion, or 30 and 45 percent of food subsidies, depending on whether the richest 40 percent are excluded from the food subsidy benefits or the richest 60 percent, respectively.

69. ***Reducing system leakages to acceptable levels and excluding the richest income groups could release resources large enough to significantly improve the conditions of lower income groups.*** In 2008/09, if the overall leakage system was reduced to 10 percent of food subsidies and if the richest 40 percent were excluded, savings could have reached LE 9.5 billion, or 48.6 percent of subsidies. Potential savings could have increased further to LE 12.3 billion, or 62.8 percent of food subsidies if the richest 60 percent were instead excluded. If these savings were evenly redistributed among the poorest 40 percent of the population, their per capita food subsidies could increase by 2.5 to reach LE 686 a year. If instead, the target group was the poorest 60 percent, per capita food subsidies would increase by 1.8 times to LE 468 a year.

Policy options

70. This study provides hard evidence on the large potential savings from reducing the substantial leakages in the current food subsidy system and from narrowing its coverage, underscoring the urgent need for reform. The transition to a new system will be less costly if the positive aspects of the current system are kept, if it contemplates lessons from other countries' experience, and if the transition is gradual.

71. ***The food subsidy system has four positive aspects.*** *First*, unlike energy subsidies, which are the bulk of the total subsidy bill, food subsidies have a large poverty impact, especially for the baladi bread. *Second*, because the difference between the market price and actual price of all subsidized foods is larger than the subsidy incurred by the government, it is more beneficial for consumers to receive subsidized foods than the equivalent cash of the government subsidy cost (see Table 2.3). *Third*, food subsidies, like all other subsidies in the Egyptian economy, are seen as part of compensation mechanisms for the low-level salaries and wages. Moreover, they are almost the most concrete benefits Egyptians receive from government spending. *Finally*, given its

extensive coverage, the food subsidy system has been successfully used as a vehicle to address micronutrient deficiencies through fortification, e.g. iron fortification of flour.

72. ***International experience shows a wide range of methods to reform inefficiencies of the Egyptian system.*** Universal subsidies and ration programs all over the world are vulnerable to leakages, suffer from errors of inclusion and of exclusion, and are biased toward urban populations (Grosh et. al. 2008)**.** This study shows that Egypt's system is not different. Therefore, Egypt could benefit from other countries "good practices", on which there is a great deal of consensus. Indeed, in the past 20 years, there have been numerous reforms in relation to the use and scope of universal subsidies and ration programs all over the world. Some of these programs have been eliminated or phased out, such as Mexico's Tortivales (Free Tortilla) program, and Bangladesh's Palli rationing scheme. Other programs have been reorganized, such as the Public Distribution System (PDS) in India, and the JPS Operasi Pasar Khusus (Social Safety Net Special Market Operations) program in Indonesia. Some others have been drastically reformed to change the types of commodities distributed and the populations covered, such as in Tunisia; and some have been replaced by other programs, such as the rice ration program in Sri Lanka, which has been replaced by a food stamp program; and bread, sugar rice and milk subsidies in Jordan, which were gradually replaced by cash assistance to poor households without an income source. Currently, universal food subsidies exist in only a few countries[40], but they are all are subject to reform discussion. Indeed, reforms to remove subsidies are usually difficult to implement and are often marred by general discontent, political opposition, and sometimes riots. This explains why most of the governments hesitate to undertake such reforms.

73. ***The far-reaching coverage and long-standing nature of Egypt's system indicates the need for a phased approach to reform.*** While there are huge potential savings from targeting food subsidies in Egypt, actual implementation would involve many details about an appropriate, adequate, and equitable social safety net suited to Egypt's middle-income status. This entails decisions on the different programs of this safety net; entitled beneficiaries from each program; and how much the government should spend on these programs. Not only is this process charged and difficult, and possibly requiring additional fiscal outlays in a transitional period, but also it usually takes time to achieve wider societal buy-in for all these details.

74. ***The policy options proposed here fall into two broad sets that are directly related to the findings of this study.*** The first set relates to reducing system leakages and the second to narrowing the coverage of the existing system. Although discussing the details of implementation is important, it is beyond the scope of the present study.

Reducing leakages

75. Inefficiencies are common in all food subsidy systems because of the governments' involvement in food marketing (procurement, storage, transport, and distribution). The longer the

[40] In addition to Egypt, universal subsidies and food ration programs are important in India, where the PDS distributes rationed amounts of basic food items to about 70 percent of the population; and in Indonesia, where about 23 percent of the population receive rations. Iran and Iraq also have untargeted food subsidy system, but they started a phase-out plan in early 2010.

distribution process is and the larger the number of transactions is, the more opportunities arise for leakage and pilferage. And as long as there is a substantial difference between the regulated price and the market price, incentives for agents to leak goods from one market to the other will persist.

76. ***Continue to move baladi bread subsidies to the end-parts of the supply chain, in order to reduce the number of agents with perverse incentives.*** Separation of the production and distribution, and the attempts to introduce a flour tendering system in some governorates are some of the steps that the GoE already has taken. The GoE also plans to purchase bread directly from bakeries at market prices and then sell it at subsidized prices in the outlets. This process is expected to eliminate all incentives for agents to leak flour to the black market driven by the substantial difference between the subsidized price (LE160 a ton) and the market price (currently around LE1300). This process could perfectly involve enlarging the size of bakeries that produce subsidized bread (benefiting thus from economies of scale), and consequently reducing their number. Given the large number of bakeries and employed individuals, this transition has to be gradual and providing incentives to small inefficient bakeries to exit the market to mitigate the adverse social impact (see World Bank, 2010a).

77. ***Ensure that the smart cards enable ration card beneficiaries to get their full share of subsidy benefits.*** Smart cards are currently covering most of Egypt's governorates, and should cover the entire country soon during 2010. Follow-up data from the MOSS show that the use of smart cards resulted in large savings in the procured quantities of subsidized foods (reaching more than 40 percent for additional cooking oil in some governorates). Still, there should be a third party evaluating how eligible beneficiaries are using the smart cards. A qualitative evaluation, including an observational module, should also be undertaken to identify potential system leakages between the consumer and the grocery shop owner. It is worth to mention that the recent decision to increase the price of subsidized basic quotas to the level of subsidized additional quotas (effective May 2010) is expected to reduce somewhat the incentive for *tamween* groceries to manipulate the system.

78. ***Replace food subsidies with food coupons/stamps.*** Food stamps are transfer programs that provide coupons that can be treated like cash, but that may restrict purchases to certain food commodities. That is why they are often claimed to be a good compromise between cash transfers and in-kind transfers. As in Jamaica, Sri Lanka and Jordan, food stamps provide a way to phase out general food subsidies (see Annex Box.1.4). Of course, public support is likely to be larger if fewer restrictions are placed on the commodities included in the food stamps program. In addition, the agriculture sector and the private sector food industry often support food stamp programs because they expand the demand for food. The coverage of food stamps varies greatly according to the targeting criteria used and the program's budget.[41] These programs have a number of advantages in terms of reducing leakages and increasing effectiveness of subsidies:

- ***Their costs are lower than for in-kind food distribution programs*** because transporting, storing, and distributing food is more expensive than moving food stamps around.
- ***They are effective in transferring income.*** There is evidence that food stamps increase household income by as much as 20 to 25 percent (Castañeda 1998). Also, Jamaica's

[41] Coverage amounted to 3 percent of the population in Honduras in 1992, 11 percent of the population in Jamaica in 1998, and 48 percent of the population in Sri Lanka in 1989. The U.S. Food Stamp Program acts as an insurance mechanism, as it is set up as an entitlement and all those who apply and qualify for the program are accepted. Therefore coverage varies from year to year, from 27.5 million people in 1994, to 17.2 million in 2000, and 26.5 million (about 9 percent of the total population) in 2007 (World Bank,2008).

experience shows that without the Food Stamp Program, the poverty gap would have been much worse during the early 1990s (Ezemenari and Subbarao 1999).

- ***They can be self-targeting***. Self targeting can be greater than with cash transfers if the use of coupons is limited to inferior, less preferred foods), or with general subsidies as in the case of Jordan, where only two thirds of the population elected to obtain food coupons.

79. ***Institute effective M&E monitoring and evaluation throughout the system to help prevent leakage and fraud***. As mentioned before, there should always be a third party evaluating the outcomes of existing programs and of any reform measure, and providing robust evidence on whether the programs are well implemented and whether they are achieving their intended results. Effective monitoring systems require a strategic focus and political support more than they require costly investments in information technology. They require adequate skills, management attention, and funding and take time to develop and mature. Also, empowering local communities makes M&E even more effective. An in-depth analysis of the problems related to leakages in food distribution programs in Bangladesh finds that leakages for the Vulnerable Group Development Program were only 8 percent, compared with the higher rates more common for other programs in South Asia, partly because of monitoring and evaluation throughout the system and partly because of women's empowerment at the local level to hold program managers accountable (see Grosh et. al.).

Narrowing Coverage

80. Targeting is a hugely controversial topic, considered anathema by some and panacea by others when the most sensible view is probably somewhere in between. There are various targeting methods for directing resources to a particular group. Some require an assessment of eligibility for each applicant individual or household, some grant eligibility to broad categories of people, for instance, all those living in certain areas (geographic targeting, and some are designed to discourage the non-needy from entering the program (self targeting). ***In the following some policy options, which would help narrowing the coverage of food subsidies, are presented:***

81. ***Use geographic targeting in the distribution of food subsidies.*** To reduce further the urban bias and to have more equitable food subsidy system, the allocation of food subsidies should be more according to the shares of governorates in poverty. Thus, governorates that do not receive food subsides proportional to their shares in poverty should receive increased food subsidies. According to the budget constraints and political conditions, this can take place while keeping for a transient period the subsidies unchanged for other governorates that do receive shares of subsidies that are higher than their shares in poverty, or gradually dropping quotas or items received by these governorates.

82. ***Use targeting for an income-based assistance program for the poor.*** It is not enough to target poor areas, in some programs entitlement should be granted only to poor individuals or poor households. This may be achieved by using means test- whether unverified means, like in Brazil, verified means, like in the United States, or proxy means like in Mexico, and Chile- or the community-based targeting system like in Bangladesh. In Egypt, the proxy means test has been developed by MOSS using 2004/05 data, yet it needs to be updated and brought together in a national framework with appropriate information and administrative systems in place. Also, the smart card is an excellent innovation that can be effectively used for poverty targeting. But, as other countries' experience show, a targeted system will not necessarily be with no problems**.** For example, in India the Public Distribution System (PDS) was transformed into the targeted PDS (TPDS) in 1997, in response to the findings of several studies that the program suffered from

poor targeting and high unit costs for handling grain (see, Radhakrishna et. al. 1997). Accordingly, targeting was shifted from poor regions to poor households. Recent studies show that the TPDS has high exclusion error (excluding poor), because the more fine the targeting, the more the likelihood of wrongly excluding the needy. Furthermore, participants may distort information depending on how information to target is collected. Such problems can raise the cost of delivering/administering the program. Another example is Indonesia's Operasi Pasar Khusus (Special Market Operations), renamed Beras untuk Keluarga Miskin (Rice for Poor Families) in 2001, a targeted rice subsidy program that replaced a stabilizing price system for rice (known as BULOG) in 1998. Entitled families were identified using geographical and categorical indicators. Although in a short time the bottom 20 percent of the population received 26.4 percent of the transfers, there were some problems. For example, some needy households were excluded because they did not have identity documents or were not on the preexisting rosters used to target program beneficiaries; families had to make a small copayment for the entire monthly rice ration, which is sometime larger than their usual daily purchase; and some communities chose to share rations rather than let the intended targeting stand (World Bank, 2008). To sum up, the experience in India and Indonesia[42] shows that shifting the primary mode of intervention is possible; however, there will be new problems, making program improvements a continuous process.

83. ***Improve self-targeting of food subsidies.*** Self-targeted programs are technically open to everyone, but are designed in such a way that take-up is expected to be much higher among the poor than the non-poor, or the level of benefits is expected to be higher among the poor. Accordingly, home delivery service of the baladi bread should be wound down in favor of using distribution outlets for better geographic targeting to neighborhoods. Home delivery removes any stigma or transaction cost that wealthier households would otherwise face. Better geographic targeting to poor and needy neighborhoods through publicly visible outlets can reach poorer households while discouraging wealthier ones. Tunisia's major strategic shift in the early 1990s to improve the targeting of subsidies was toward self-targeting and quality differentiation. This was achieved in part through the innovative use of packaging and marketing. For example, the government differentiated the subsidy level on different packaging forms of milk, all of which were nutritionally equivalent. The reforms resulted in a decrease in expenditures on food subsidies from around 4.0 percent of GDP in 1984 to 1.5 percent in 1998. Meanwhile, the share of total transfers received by the poorest quintile increased from 8 to 21 percent.

84. ***Use the same targeting system for multiple programs, and multiple targeting methods within a single program to ensure good cost-effectiveness***. There should be an overall strategy of how to target food subsidies to the needy using a combination of geographic targeting, proxy means testing (PMT), and outreach campaigns. This clear targeting strategy actually applies to any social assistance benefits, whether health subsidies, cash assistance, other in-kind assistance. Colombia, for example, first developed its proxy means test to target subsidized health insurance, and later used it for targeting hospital fee waivers and its CCT, public works, youth training, and social pension programs. Armenia, Chile and Jamaica also use their proxy means test for several programs. This can not only yield economies of scale in the targeting system, but can also lead to a more integrated package of support for households that may provide better risk management and more effective assistance for moving them out of poverty. Also, the use of multiple targeting methods within a single program generally produces better targeting than the use of a single method. In Egypt, work has been done on different parts of the targeting toolkits through MOSS and others, but- as previously mentioned- it needs to be updated and brought together in a national framework.

[42] For more details about India TPDS and Indonesia's Beras untuk Keluarga Miskin see Box.1.3.

85. This section presented some broad policy options that would help improve the efficiency and effectiveness of Egypt's food subsidy system, and would ultimately support a more comprehensive and effective social safety net system. A system in which the poor will receive more benefits from the government with less burden on the budget. Given the sensitivity of the topic, the nature and timing of reforms are critical to ensure their sustainability. Country experience has shown that the program's success is ensured by a combination of three factors: strong political support, gradual and ongoing drive to expand and improve the M&E system, and capacity to innovate. It was also shown that the public is more likely to accept reforms if the rationale behind the reforms is explained in advance (Grosh et. al., 2008). Hence, a communication strategy for subsidy reforms is important.

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Annex Boxes

Annex Box 1: Measures Affecting the Ration-Card System (1997-2009)

	Decree	Date	Description
1-	#488 for 1997	December 3	The quota of subsidized sugar is 1kg/person/month. The price of a 1 Kg pack is LE0.6 for high-subsidy ration cards and LE0.85 for low-subsidy ration cards.
2-	#168 for 1999	April 24	The quota of subsidized oil is 0.5 Kg in cities and 0.3 Kg in villages (per month, per person). The prices of these packs are LE 0.5 and LE0.3 for high-subsidy ration cards and LE0.75 and LE0.50 for low-subsidy ration cards.
3-	#75 for 2004	March 16	The quotas of additional subsidized commodity items are as follows: 1 Kg of rice/person/month, with a maximum of 4 kg for each card, for LE1/Kg, 1 Kg of macaroni/person/month, with a maximum of 4 Kg, for LE1.5/Kg, 0.5 Kg of oil/person/month, with a maximum of 2 Kg for each card, for LE3.5/Kg, 0.5 Kg of lentils/person/month, with a maximum of 2 Kg for each card, for LE3/Kg, 0.5 Kg of beans, with a maximum of 2 Kg for each card, for LE2/Kg, 2 Kg of vegetable ghee/card/month, for LE9/Pack, 0.05Kg of tea /person/month, for LE0.65 according to the number of people.
4-	#82 for 2004	March 24	The prices of additional subsidized commodities are reset (for both kinds of cards) as follows: LE1.75 and LE3.5 for 0.5 Kg and 1 Kg, respectively, of additional subsidized oil, LE9 for additional subsidized vegetable ghee, LE1 for additional subsidized rice, LE0.65 for 0.05 Kg-pack of additional subsidized tea, LE1.5 and LE3 for 0.5 Kg and 1 Kg, respectively, of additional subsidized lentils, LE1 and LE2 for 0.5Kg and 1 Kg, respectively, of additional subsidized beans, and LE1.5 for 1-Kg pack of additional subsidized macaroni.
5-	#56 for 2006	April 22	Four additional subsidized commodities are removed from the ration cards (macaroni, beans, lentils, and ghee) and 0.5 Kg of additional free sugar was offered to each person with a ration card (both kinds), with 2 Kg maximum per card, for LE1.50/Kg.
6-	#69 for 2007	June 24	High-subsidy cards are issued to all people eligible for cash-transfers (social solidarity) who do not have rations cards.
7-	#7 for 2008	January 28	Those born between 1988 and 2005 are added to the ration-card system.
8-	#50 for 2008	May 25	The prices of additional subsidized commodities no.2 have been determined as follows: LE3/Kg for sugar, LE5/Kg for oil, and LE2/Kg for rice.
9-	#62 for 2008	June 4	High-subsidy cards are issued to all citizens with current ration cards so they and their families can get fully subsidized commodities.
10-	#63 for 2008	June 6	The quota of oil is unified across governorates to 0.5Kg/person, for LE0.5.
11-	#79 for 2008	August 9	Additional amounts of rice, sugar, and edible oil are distributed via ration cards as follows: 1 Kg of sugar/person/month, with a maximum of 4 Kg for each card, for LE1.75/Kg; 1 Kg oil/person/month, with a maximum of 4 Kg for each card, for LE4.25; 2 Kg of rice/person/month, with a maximum of 8 Kg for each card, for LE1.5.
12-	#63 for 2009	April 28	The system is opened to specific categories: all recipients of social cash assistance from the Government; widowed, divorced, or family-supporting women; chronically ill and those with special needs; temporary seasonal and occasional workers, street vendors, and drivers; craftsmen, professionals with income lower than LE400/month; underage children with no breadwinner or fixed income; and non-government and non-public-sector pensioners with pensions less than LE 400/month .
13-	#84 for 2009	September 9	In addition to the categories stated in decree #63 for 2009, the system is opened to unemployed; those under investigation with educational qualifications but no work; government, public-sector, or private-sector pensioners with pensions less than LE750/month; and government or public-enterprise-sector workers with salaries less than LE1000/month.

Source: *Ministerial Decrees, MOSS.*

Annex Box 2: Country Experience: Reform of subsidized Rice in Bangladesh

Who advocates food subsidy reform and who resists? In many countries the nature and timing of food subsidy reform depends on the diverse and competing interests of government agencies and domestic groups. For example, support for reform often comes from the Ministry of Finance, which fears the soaring costs of subsidies, and the Ministry of Agriculture, which represents farmers' interests. By contrast, the Ministry of Food (or Supply), which represents consumers' interests, often opposes food subsidy reform.

In many countries, there are often key domestic groups also opposing food subsidy reform. These groups, which include food millers, processors and bakers, oppose reform because they fear the loss of lucrative possibilities for rent-seeking. For example, in Bangladesh the Ministry of Food enters into contract with private rice millers to buy paddy, mill the paddy into rice and deliver processed rice to the Ministry for distribution in various food subsidy programs. However, when there is a large gap between the market price for paddy and the procurement price for rice, rice millers are able to earn handsome profits by selling rice on the black market. Because of lax government supervision, rice millers can also procure paddy, mill it and not deliver any rice at all to the government.

In an attempt to end such rent-seeking, in 1992 the government of Bangladesh temporarily suspended millgate contracting with private rice millers in favor of procuring rice through open tender. However, the rice millers vigorously opposed this move, by taking out full-page advertisements in local newspapers. Such pressure, coupled with the marked instability of rice prices in 1993, led the government to re-institute millgate contracting in 1994. Since 1995 millgate contracts between the Ministry of Food and private rice millers have continued to account for most of the rice procured by the government of Bangladesh.

Written by Richard Adams Using Source: Richard Adams, Jr., 1998, "The Political Economy of the Food Subsidy System in Bangladesh, Journal of Development Studies, Vol 35, No. 1 (October 1998).

Annex Box 3: Country Experience: From Universal to Targeted Distribution, India and Indonesia

In June 1997 in India, the existing PDS was transformed into the targeted PDS in response to the findings of several studies (for instance, Radhakrishna and others 1997) that the program suffered from poor targeting and high unit costs for handling grain. The new program differentiates the quantities households are allowed to buy and prices depend on their poverty status.

The PDS used to provide all consumers with access to rice, wheat, sugar, edible oils, kerosene, coal, and standard cloth at subsidized prices through a network of registered shops. Since

1997, only households below the state-defined poverty line are entitled to a ration card, which allows them to buy a larger quantity of rice and/or wheat than before (10 kilograms in 1997, 20 in 2000, 25 in 2001) at a subsidized price equal to about 50 percent of the economic cost.

Since 2001, those above the poverty line may purchase food grains at a discount rate (equal to 70 percent of the economic cost). India also increased the allocation of state quotas of poverty cards to poorer states, shifting from an allocation formula that favored states with the largest food deficits regardless of whether they were relatively poor.

In Indonesia, BULOG, a publicly owned corporation, maintained a floor price and a ceiling price in order to stabilize prices through its monopoly control over international trade in rice through 1997. In 1998, Indonesia abandoned this policy and replaced it with Operasi Pasar Khusus (Special Market Operations), renamed Beras untuk Keluarga Miskin (Rice for Poor Families) in 2001, a targeted rice subsidy program for poor consumers (Kitano, Ariga, and Shimato 1999; McCulloch 2004; Pritchett, Sumarto, and Suryahadi 2002; World Bank 2006f). The reason for the change was a shift in the exchange rate following the 1997 Asian financial crisis, which turned a policy geared toward producer subsidies into one that required massive and unsustainable consumer subsidies Under the new program, BULOG sold rice to 3.4 million households at a subsidized price of Rp 1,000 (US$0.10) per kilogram, compared with a market price of Rp 3,000 (US$0.30) per kilogram, as of August 1998. The program reached 10.4 million families in 1999 and 12 million in 2003. Each family, identified by the National Family Plan Coordination Agency using geographical and categorical indicators, was entitled to receive 10 kilograms (later 20 kilograms) of rice per month. On the whole, the operation was well implemented. In a short time, rice was being distributed in a relatively well-controlled and accountable way.

The main issues were that some needy households were excluded because they did not have identity documents or were not on the preexisting rosters used to target program beneficiaries; families had to make a small copayment for the entire monthly rice ration, which meant they had to find ways to finance a payment that was larger than their usual daily purchase; and some communities chose to share rations rather than let the intended targeting stand (SMERU Research Institute 1998).

The experience in India and Indonesia shows that shifting the primary mode of intervention is possible; however, program improvements are still needed. For additional information on the reforms in India, see Ahluwalia (1993), Dev and others (2004), Government of India (2001, 2007b), Mooij (1999b), Radhakrishna and others (1997), and Tritah (2002); for Indonesia, see ADB (2006), Ahmad and Leyth (2000), Daly and Fane

Annex Box 4: Country Experience: Phasing out Food subsidies in Jordan

Jordan

In Jordan the costs of a universal food subsidy program reached 3.9 percent of GDP in 1990. The whole Jordanian population benefited from these subsidies on bread, sugar, rice and milk.

In an effort to reduce costs, the Jordanian government embarked on a four-step program to reform food subsidies. First, in 1991 food subsidies were replaced with food coupons. These food coupons allowed Jordanian households to purchase at designated prices certain amounts of each subsidized food. This reform reduced the costs of food subsidies through the principle of self-selection, because only two-thirds of the population elected to obtain food coupons. Second, in 1996 the government eliminated the subsidy on baladi bread and allowed the prices of flour and bread to rise. To forestall popular reaction, this reform was accompanied by the start of a general cash transfer program, whereby households received a designated cash transfer per month. In 1997 this general cash transfer was merged with the food coupon program. Third, in 1998, when the international price of wheat fell, the government reduced the price of baladi bread in the market. Finally, in January 1999 the government eliminated the general cash transfer program.

To make up for the elimination of food subsidies and the cash transfer program, the government rapidly expanded targeted cash assistance through its National Aid Fund (NAF). This fund is designed to provide monthly cash assistance to poor households without an income source. Between 1987 and 1999 disbursed cash assistance from NAF increased from US $2.8 million to US $23.2 million. The rapid growth of cash assistance from NAF helped to prevent any popular reaction to the elimination of food subsidies.

Annex Box 5: Country Experience: Elimination of subsidy program on tortillas in Mexico

In the mid-1990s Mexico had a general tortilla subsidy program that was poorly targeted to the poor and represented a substantial drain on the government budget. In 1997 Mexico created a new conditional cash transfer program, known as Progresa, which gradually replaced this general subsidy program on tortillas.

Progresa (renamed Oportunidades in 2000) is a targeted assistance program that provides cash to beneficiary families (usually to mothers) on the condition that children attend school and family members visit health centers regularly. The selection of beneficiary families is done in three stages: first, potential recipient communities are identified as being poor; second, potential recipient households are selected based on census data; and third, the list of potential participant households is presented to community assemblies for review. In Progresa/Oportunidades cash transfers for education increase with the level of school grade and are higher for girls in middle school. Cash transfers for food are conditional on households making regular trips to health clinics for preventive health check-ups and monthly nutrition sessions.

During the first ten years of Progresa/Oportunidades the number of beneficiaries increased rapidly so that by 2008 nearly one out of every four Mexican families (5 million households) were receiving assistance. Over the same period of time cash payments to the poorest families also increased by 24 percent to an average of 665 pesos per month. While the rate of increase in cash payments (24 percent) did not fully compensate for the increase in food prices (39 percent) over the same period of time, Progresa/Oportunidades has been credited with having a positive impact on the poor, improving the health and nutrition of children and adults, and helping to increase school enrollment.

Written by Richard Adams Source: Mulat Demeke, Guendalina Pangrazio and Materne Maetz, 2008, "Country Responses to the Food Security Crisis," Food and Agriculture Organization, Rome, Italy.

Annex Box 6: Country Experience: Drastic Changes in the Food Subsidy program in Tunisia

In Tunisia the costs of a universal food subsidy program reached 4 percent of GDP in 1984. Initial efforts to cut the costs of this program by reducing the subsidies on various goods led to riots in 1985, forcing officials to rescind their reform efforts.

In 1990 the Tunisian government adopted an innovative series of reforms designed to reduce the costs of food subsidies in a manner that was both politically acceptable and that protected the purchasing power of the poor. These reforms focused on self-targeting food subsidies by shifting subsidies to food goods that are "inferior" goods consumed mainly by the poor. For example, subsidies were shifted to semolina and generic cooking oil, which are mainly consumed by the poor. At the same time, subsidies on baguettes, which are eaten mainly by the rich, were eliminated. Also, subsidies on milk were shifted to reconstituted milk packaged in less convenient half-liter cartons, making them less desirable to the rich, who prefer to buy their fresh milk in bottles.

Rather than introducing these reform measures all at once, the government gradually raised the prices of certain goods in some months and other prices in other months. Also, subsidies on the most sensitive products – like bread -- were reduced during the summer when the students (who were pivotal in the earlier riots) were not in school.

The results of these subsidy reforms were impressive. The self-targeting measures reduced the costs of the food subsidy program by half (from 4 to 2 percent of GDP). The reforms also improved the poverty impact of the program – food subsidies benefited the rich two times more than the poor in 1985 but by 1993 the poor benefited 1.1 times more than the rich.

Annex: Methodology and Calculation Method

Household Income, Expenditure and Consumption Surveys

Both HIECS of 2008/09 and 2004/05 are highly comparable in terms of the sample size, sample design and the instruments used to measure income or expenditure.

The Sample

The sample of HIECS 2008/09 was based on the 2006 Population Census sample frames of 2400 area sampling units distributed between urban and rural areas, while the sample of 2004/05 was based on 1996 population Census sample frame of 1200 area sampling units. Although the 2008/09 sampling design was similar to that of 2004/05 as both samples are self weighted within Urban and rural stratum but not at the national level; in 2008/09 sample the number of PSUs is 2400 PSU where 20 households were chosen from each PSU, while 40 households were selected from the 1200 PSU in 2004/05.

The samples of both surveys are stratified multistage random samples. The sample designs of both surveys were nationally representative and the size for both surveys is large enough to allow for inferences at the regional and governorate levels, with the exception of Frontier governorates where the sample size is small. Throughout the report we report the five main regions, while All Egypt figures include all governorates. Levels of bias and imprecision for both surveys are within statistically acceptable margins.

CAPMAS's stratified, multistage sample design can be explained as follows: The master sample is stratified such that urban and rural areas are self-independent strata. Each stratum (urban or rural) is divided into internal layers (being the governorates), with probability proportion to size from an updated population census of the closest year. The number of PSU,s was identified in each urban and rural areas of each governorate using proportional to size approach. Primary Sampling Units; PSU's (areas) were systematically selected, using sampling interval and a random start. Using maps, these areas were further subdivided into a number of chunks of about 700 households each and one portion is chosen randomly from each area. Household lists for the selected portion were prepared. Finally 20 households for the 2008/09 sample.

Table AI-1: Sample Size of the 1995/96, 1999/2000 and 2004/05 HIECS

	2004/2005		2008/09	
	Households	Individuals	Households	Individuals
Urban	21743	88843	21281	89830
Rural	25352	118588	25576	128929
Total	47095	207431	46857	218759

Source: Household Income and Expenditure Consumption Surveys of 2008/09 and 2004/2005, (CAPMAS).

One of the interesting characteristics of the sample selection method concerns the third stage of the sampling, the systematic selection of 20 households are randomly divided into four quarters, so that 5 households are enumerated in each quarter (three month) of

the surveyed year. Thus all areas are represented in each quarter; therefore no seasonal bias can be detected in any areas.

The Questionnaire

The general framework of survey implementation is to apply the recent recommendations of different concepts and definitions of income and expenditure considering maintaining the consistency with previous surveys in order to compare and study change in pertinent indicators.

The survey of 2008/09 was administered over 12 months, with 6 visits to each household over a period of 15 days, while the 2004/05 survey was administered over one month period. Interviewers, field supervisors and office auditors were well trained and well explained manual were distributed.

Data for the most recent survey was collected from April 2008 to March 2009. This is the largest survey ever conducted in Egypt. The measure of total consumption used in this report is quite extensive and draws upon responses from several sections of the survey.

The questionnaire consists of seven sections on a series of topics that integrate monetary to non-monetary measures of household welfare and a variety of household behavioral characteristics. The first section is concerned with basic information for all household members such as age, sex, and relation to head of household, education, employment status, and income sources. In the second section, information on housing and basic amenities is collected. The possession of durable goods is reported in section three. These information were collected during the first visit to household. Food consumption (in terms of value and quantity) includes food that the household has purchased, own production and in kind transfers for 279 items, and these data are reported in section four. A diary book was delivered to each household to report every food consumption during a period of 15 days (in 2004/05 data was collected for the entire month). Non-food consumption is the sum of expenditure of 298 non-food items, including expenditure on fuel, clothing, schooling, health, and several miscellaneous items. Information on consumption on non-food goods and services are registered in section five. Different recall periods were applied depending on item's type. Section six is concerned with Transfer and credit expenditure, while income by detailed income sources is obtained from section seven.

The 2008/09 follows the 2004/05 format almost exactly and total consumption definitions and recall periods-except food- are similar in both survey years.

Egypt Integrated Household Survey

From March to May 1997, IFPRI, together with MALR and MOTS, carried out the Egypt Integrated Household Survey (EIHS). This was a single-round, nationally representative survey that included urban and rural households. Information was collected during one visit to each household. The EIHS collected information on multiple topics, including income, expenditures, food consumption, nutrition and health status, education,

employment, rural credit and savings, farming, housing, maternity history, child care, remittances and transfers, migration, and the use of the food subsidy system by households.

The questionnaires were administered to 2,500 households14 from 20 governorates (the 6 frontier governorates were excluded), using a two-stage, and stratified selection process. The 1986 Egypt census frame and a 1993 listing of households, supplied by CAPMAS, were used for the sample frame. CAPMAS uses this sample frame as a master sample for much of its survey work. The frame consists of 492 primary sampling units.

Households were selected from the master sample in a two-stage process. In the first stage, 125 primary sampling units were randomly selected with probability proportional to size from the CAPMAS master sample. In the second stage of the process, 20 households were randomly selected from each primary sampling unit.

The EIHS regional samples of households are not self-weighted. Therefore, it is necessary to use weights for any estimates aggregated over regions. These weights are the ratio of the expected number of households in each region if the regional samples were self-weighted, and the actual number of sample households in that region.

Food consumption in EHIS were collected during only one visit, using recall period approach and the recall period is one week.

Table AI-2 shows differences between IFPRI and CAPMAS household surveys. Differences show comparability of results of those surveys is questionable and hence limitations should be noted before any trend analysis is performed.

Table AI-2: Differences between EHIS of IFPRI and HIECS of CAPMAS

	IFPRI 1997	HIECS 2004/05	HIECS 2008/09
SAMPLE SIZE	2352	47095	46857
Representation of national population	Representative at regional level but not at the governorate level	Representative at governorate urban and rural areas	Representative at governorate urban and rural areas
Sample coverage	Frontier governorates were excluded	All Egypt	All Egypt
Number of PSU	125 PSUs	1200	2400
Administrative	One round	Four rounds. Each Markaz is represented in each round	Four rounds. Each PSU is represented in each round
Duration of data collection	March to May 1997	July 2004 to June 2005	April 2008 to March 2009
Method of collecting food items data	Recall of 7 days recall period during one visit	Diary book to register every day food expenditure for 30 days and 10 visits	Diary book to register every day food expenditure for 15 days and 6 visits
Number of visits to each household	One visit	10 visits	6 visits

Methods of Calculation

System Leakage

System leakages occur when the government allocations do not reach the intended beneficiaries, resulting in a difference between the quantities of food subsidies supplied by the GOE and those received by the consumers. This loss usually happens during procurement, storage and transportation, or when the subsidies are introduced using long distribution chains, which allows for opportunities of leakage and rent-seeking behavior, for example through the diversion of supplies to private outlets at market prices. The magnitude of leakages in the Egyptian food subsidy system can be approximated by subtracting the total quantities of subsidized food that were actually purchased by consumers (as per the household survey) from the quantities of the same commodities supplied by GASC during the same period. The difference between supply and purchases measures the extent of leakage in the system.

The cost of delivering LE 1 of food subsidy benefits to consumers.

To achieve this goal, we should first estimate system leakage—the amount allocated to subsidies that does not reach its target. This is calculated as the difference between the quantities of subsidized foods as supplied by GASC to bakeries, baladi wheat flour warehouses, or *tamween* groceries and the quantities of these foods as estimated in the HIECS data. The financial cost to GASC is then calculated using the subsidy ratio of the relevant subsidy food. Finally, the cost of delivering LE 1 of food subsidy benefits is calculated as the quotient of subsidy cost and benefits received by consumers.

Who is benefiting from food subsidies?

Egyptian food subsidies are not meant to target any specific groups, yet it is important to examine the potential savings from different targeting scenarios. In any society, there should be some specific groups that social policies target. One criterion to use in determining these groups is income or consumption expenditure as proxy for income. The present study will estimate the potential savings in two targeting scenarios. The government is assumed to target the poorest 40 percent of the population in the first scenario, and the poorest 60 percent in the second. The first scenario targets almost all Egyptian poor and near-poor.[43] According to the latest 2008/09 HIECS data, the poor constitute 22 percent of the Egyptian population, but there is another 19 percent that is near-poor (i.e., vulnerable or potentially poor). By adding another 20 percent of the population in the second scenario, we ensure that food subsidies cover poor, near-poor, and the lower middle-income groups in the country.

[43] Any household that spends less than the lower poverty line is considered poor, and households that spend less than the upper poverty line is judged as non-poor. The lower poverty line emerges when the food poverty line is adjusted for expenditure on non-food goods by households who have to forego food consumption to purchase indispensable non-food items. The non-food allowance can be estimated by identifying the share of non-food expenditure for households whose expenditure was equivalent to the food poverty line. If, instead, the non-food component of the poverty line is estimated as the non-food expenditure of households whose food expenditure equals the food poverty line, the upper poverty line emerges.

Data sources

The study relies on two main sources: (1) official government data from GASC and the MOSS, to highlight the supply-side dimension of food subsidies; and (2) household data from the 2004/05 and 2008/09 HIECSs, to capture the demand dimension of food subsidies. However, the data availability limitations preclude the possibility of distinguishing the system leakage of basic quotas for sugar and cooking oil from those of additional quotas as HIECS data do not make such distinction. Also, since GASC data provide information about food subsidies at the governorate level with no distinction between rural and urban areas, it was not possible to estimate the system leakage at this geographical disaggregation level. Finally, tea was excluded from the analysis, because tea subsidies were too small in 2008/09.

Targeting Errors

Targeting does not always work perfectly well. **Inclusion errors** occur when non-poor people are included in the subsidies system. It is measured by the proportion of the non-needy beneficiaries in the total number of consumers benefiting from subsidies.

Since program officials do not have perfect information about who is poor, targeting errors can also occur when needy people do not have access to the subsidies program. The proportion of needy people who do not benefit from subsidies compared to the total number of needy people is referred to as an **error of exclusion**.

Annex Tables

Table 1: Amounts and share to GDP of food subsidies in Egypt (FY 96 - FY09)

FY	GASC		Fiscal Budget	
	Million LE	%GDP	Million LE	%GDP
FY 96				0.9
FY 97				0.9
FY 98				0.8
FY 99				0.8
FY 00	2111	0.6	5024	0.8
FY 01	2491	0.7	5330	0.9
FY 02	2850	0.8	5949	1.2
FY 03	3787	0.9	6936	1.2
FY 04	7120	1.5	10347	1.7
FY 05	8004	1.5	13765	2.1
FY 06	7786	1.3	54245	1.5
FY 07	10497	1.4	53959	1.3
FY 08	19178	2.1	84205	1.8
FY 09	20052	1.9	93838	2.0

Source: Ministry of Finance, General Authority for Supply Commodities and authors' calculations.

Table 2: Subsidized Foods (Quantities, Cost, Revenues, Subsidies), 2004/05

Commodity	Beginning of period Inventory (thousand tons) (1)	Value (LE millions) (2)	Quantity purchased (thousand ton) (3)	Value (LE millions) (4)	Total (thousand ton) (5)	Actual Disbursement (thousand ton) (1+3-9)	Revenues (LE millions) (7)	Cost (LE millions) (8)	End of period Inventory (thousand ton) (9)	value (LE millions) (10)	Subsidies (LE millions) (11)
Local Wheat	1127327	1233	2502810	2898	3630137	1819049	805	2359	1811088	2210	1555
Imported Wheat	948479	1273	4994320	5795	5942799	5079056	2646	7039	863743	1238	4393
Maize	9192	10	448734	490	457926	446000	163	543	11926	16	380
Baked Commodities	0	0	420220	488	420220	409000	363	550	11220	6	187
Cooking Oil	59077	259	133245	474	192322	175698	162	860	16624	57	699
Additional Cooking Oil	663	3	194568	707	195231	188772	595	883	6459	21	288
Ghee	6619	27	104353	313	110972	90886	377	434	20086	51	57
Sugar	0	0	469755	850	469755	469755	230	863	0	0	633
Rice	0	0	373698	679	373698	373698	325	747	0	0	422
Beans	6840	51	129105	277	135945	105528	190	258	30417	78	68
Lentils	20447	112	65405	268	85852	84240	237	379	1612	6	142
Macaroni	0	12	474774	552	474774	471501	516	846	3273	10	330
Tea	1856	19	17197	166	19053	17813	224	201	1240	12	-23
Total Cards Commodities		483		4286	2057602		2856	5472		234	2616
Total	2180500	2998	10328184	13957	12508684	9730996	6833	15963	2777688	3704	9131

Source: General Authority for Supply Commodities and authors' calculations.

Table 3: Subsidized Foods (Qunatities, Cost, Revenues, Subsidies), 2008/09

Commodity	Beginning of period Inventory (thousand tons) (1)	Value (LE millions) (2)	Quantity purchased (thousand ton) (3)	Value (LE millions) (4)	Total (thousand ton) (5)	Actual Disbursement (thousand ton) (1+3-9)	Revenues (LE millions) (7)	Cost (LE millions) (8)	End of period Inventory (thousand ton) (9)	value (LE millions) (10)	Subsidies (LE millions) (11)
Local Wheat	1984163	5115	3072128	5192	5056291	2253123	1395	5938	2803168	5098	4543
Imported Wheat	128115	266	5865884	8782	5993999	5571000	3023	10882	401329	595	7860
Maize	4605	13	473146	999	477751	442694	107	1023	35057	84	916
Bakeried	0	4	6107	10	6107	6107	7	14	0	0	7
Tebaki Wheat 82%	0	10	319737	528	319737	319737	302	585	0	0	283
Flour 82%	0	0	14601	22	14601	14601	3	22	0	0	19
Tebaki 82%	0	0	137192	205	137192	137192	123	205	0	0	82
Flour 76%	0	0	141340	220	141340	141340	127	221	0	0	94
Wheat 76%	0	0	6314	10	6314	6314	5	10	0	0	5
Cooking Oil	29089	213	440003	2326	469092	412081	390	2677	57011	260	2287
Additional Cooking Oil	22361	165	430653	2527	453014	387000	1580	2832	66014	273	1252
Sugar (with Additional)	0	0	1244391	3206	1244391	1244391	1079	3225	0	0	2147
Rice	0	0	971265	1823	971265	971265	1282	1842		0	561
Tea	4648	22	7327	95	11975	10475	114	120	1500	15	6
Total Cards Commodities	56098	400	3093639	9977	3149737	3025212	4444	10696	124525	548	6252
Total	2172981	5807	13130088	25944	15303069	11938990	9536	29598	3364079	6325	20062

Source: General Authority for Supply Commodities and authors' calculations.

Table 4: Subsidized Foods: Quantity, Cost, Subsidies, Subsidy ratios, by Commodity, 2004/2005 and 2008/2009

	Quantities (thousands tons)		Cost (LE/ton)		Subsidies (millions)		Subsidy (LE/ton)		Subsidy ratio	
	2004/05	2008/09	2004/05	2008/09	2004/05	2008/09	2004/05	2008/09	2004/05	2008/09
Wheat flour Baladi bread	5238081	6098989	1651	2627	5556	12022	1132	2108	68.6%	80.2%
Wheat Flour for direct consumption	784086	694402	1651	2627	772	1316	1051	2027	63.7%	77.2%
Cooking Oil	175698	412081	4896.8	6495.5	699	2287	3976.0	5548.7	81.2%	85.4%
Additional cooking oil	188772	387000	4679.2	7317.3	288	1252	1524.8	3235.5	32.6%	44.2%
Sugar	469755	746635	1836.6	2591.8	633	2147	1346.7	2874.9	73.3%	110.9%
Sugar Free	-	497756	-	2591.8	-	0				
Rice	373698	971265	1998.8	1896.7	422	561	1128.8	577.2	56.5%	30.4%
Tea	17813	10475	11280.9	11492.3	-23	6	-1288.4	593.0	-11.4%	5.2%
Bean	105528	-	2447.7	-	68	0	643.0		26.3%	
Lentil	84240	-	4500.4	-	142	0	1690.4		37.6%	
Macaroni	471501	-	1794.2	-	330	0	700.3		39.0%	
Ghee	90886	-	4778.2	-	57	0	628.6		13.2%	

Source: General Authority for Supply Commodities and authors' calculations.

Table 5: Subsidized Foods: Quantities, by Item and Governorate, 2004/05

Governorate	Oil	Oil Additional	Sugar	Rice	Tea	Wheat Flour	
						BB Bakeries	Direct Consuption
Cairo	26,239.10	21,208.73	52,642.10	41,994.63	1,996.18	789,465.02	-
Alexandria	13,774.00	10,640.07	27,603.06	21,068.01	1,046.70	342,682.33	11,686.50
Port-Said	1,883.83	1,630.53	3,766.28	3,228.54	142.82	45,753.08	-
Suez	1,516.85	1,368.69	3,042.47	2,710.09	115.37	43,116.61	1,166.48
Damietta	3,204.96	3,451.48	7,839.27	6,834.14	297.26	83,512.36	4,332.68
Dakahleya	12,183.75	15,115.09	37,012.64	29,846.35	1,403.51	262,974.47	4,908.23
Sharkeya	10,813.69	13,115.61	35,037.48	25,969.74	1,328.61	287,704.51	75.20
Kalyoubeya	8,257.06	9,116.66	23,321.52	18,051.56	884.35	281,382.71	511.38
Kafr-El-Sheikh	7,633.19	7,843.18	20,315.85	15,530.00	770.37	143,492.27	28,255.16
Gharbeya	9,345.77	12,496.73	31,074.91	24,756.09	1,178.35	222,536.36	14,659.51
Menofeya	7,094.96	9,426.10	7,839.27	18,652.50	297.26	183,170.60	15,120.76
El Behera	10,948.25	12,520.53	34,215.53	24,791.44	1,297.44	254,756.67	42,128.56
Ismailia	2,691.19	2,201.80	5,827.31	4,359.71	220.97	76,153.66	5,204.03
Giza	13,247.99	12,794.27	32,976.46	25,321.68	1,250.46	471,876.26	73,179.25
Beni Suef	4,562.79	5,760.40	15,138.74	11,417.73	574.06	151,936.41	957.58
Fayoum	5,125.49	6,867.25	17,199.77	13,597.59	652.21	179,948.45	69,742.99
Menya	8,428.32	10,663.87	28,093.78	21,115.14	1,065.31	281,594.03	10.03
Assyout	6,874.77	8,331.15	22,892.14	16,484.42	868.06	264,737.56	45,522.71
Souhag	7,523.10	9,318.99	25,088.11	18,463.97	951.34	315,055.67	161,958.22
Kena	6,299.83	8,021.71	20,966.06	15,883.49	795.03	254,949.00	170,310.73
Assouan	4,330.37	3,296.76	8,661.23	6,527.78	328.43	128,705.75	65,707.11
Luxor	1,003.08	1,249.67	3,214.22	2,474.43	121.88	47,514.72	25,629.08
Red Sea	513.77	428.46	993.71	848.38	37.68	22,922.19	4,562.30
Wadi-El-Gedid	403.68	535.57	1,140.93	1,060.47	43.26	15,533.86	2,496.73
Matrouh	856.29	547.48	1,717.52	1,084.04	65.13	35,056.20	11,395.72
North of Sinai	819.59	726.00	1,877.01	1,437.53	71.18	39,861.30	21,783.72
South of Sinai	122.33	95.21	257.63	188.53	9.77	11,688.58	2,780.83
Total	**175,698.00**	**188,772.00**	**469,755.00**	**373,698.00**	**17,813.00**	**5,238,081**	**784,085.48**

Source: General Authority for Supply Commodities and authors' calculations.

Table 6: Subsidized Foods: Quantities, by Item and Governorate, 2008/09

	Oil	Oil Additional	Sugar	Sugar Additional	All Sugar	Rice	Wheat Flour	
							BB Bakeries*	Direct Consuption*
Cairo	36,092	35,576	43,734	45,758	89,492	89,287	883916.1	-
Alexandria	21,248	18,924	40,501	24,340	64,841	47,495	379251.8	11460.2
Port-Said	2,787	3,083	5,313	3,965	9,278	7,737	47729.4	-
Suez	2,564	2,682	3,634	3,450	7,084	6,732	46673.0	662.4
Damietta	6,692	7,078	12,757	9,104	21,860	17,764	88324.0	4255.9
Dakahleya	30,938	32,196	58,972	41,410	100,382	80,802	300633.7	579.9
Sharkeya	30,451	28,312	58,045	36,415	94,459	71,056	386149.9	14.8
Kalyoubeya	21,945	18,785	41,829	24,161	65,990	47,144	380465.9	131.2
Kafr-El-Sheikh	16,882	16,792	32,180	21,597	53,777	42,143	160061.0	13602.5
Gharbeya	25,218	26,300	48,070	33,827	81,897	66,007	274677.2	1136.9
Menofeya	19,630	20,135	37,418	25,898	63,316	50,534	219475.5	394.0
El Behera	28,939	28,163	55,162	36,223	91,386	70,682	303379.7	22707.3
Ismailia	4,852	4,526	9,248	5,822	15,070	11,360	91033.6	68.9
Giza	12,530	12,331	23,884	15,860	39,744	30,947	575865.3	75183.6
Beni Suef	13,490	11,940	25,714	15,356	41,071	29,965	172549.5	-
Fayoum	15,581	14,976	29,699	19,261	48,960	37,585	212422.9	65019.8
Menya	25,626	21,253	48,847	27,335	76,182	53,338	338463.9	4.9
Assyout	20,945	15,804	27,393	20,328	47,721	39,665	308484.1	40749.1
Souhag	22,602	18,477	43,082	23,765	66,848	46,373	337524.3	154864.3
Kena	18,526	17,323	35,313	22,280	57,593	43,475	254702.6	165783.7
Assouan	7,402	7,041	14,110	9,056	23,166	17,670	138638.1	66015.5
Luxor	2,853	2,589	5,439	3,330	8,769	6,498	53978.9	25993.1
Red Sea	894	894	1,704	1,150	2,854	2,244	26624.5	3526.0
Wadi-El-Gedid	1,078	1,248	2,055	1,605	3,660	3,132	18311.5	3273.2
Matrouh	1,630	1,118	3,108	1,437	4,545	2,805	38530.2	12835.2
North of Sinai	1,907	1,630	3,634	2,096	5,730	4,090	48067.4	22751.7
South of Sinai	250	224	476	287	764	561	13054.8	3388.1
Helwan	7,744	7,255	14,762	9,331	24,093	18,208	-	-
6th of October	10,782	10,347	20,551	13,308	33,859	25,968	-	-
Total	**412,081**	**387,000**	**746,635**	**497,756**	**1,244,391**	**971,265**	**6,098,988.77**	**694,402.17**

*Helwan Governorate Quantities are added to Cairo and 6th of october Quantities are added to Giza

Source: General Authority for Supply Commodities and authors' calculations.

Table 7: Food Subsidies, by Item and Governorate, 2004/05

Million (LE)

Governorate	Wheat flour for bakeries	Wheat flour for direct consumption	Cooking Oil	Addidtional Cooking Oil	Sugar	Rice	Tea
Cairo	837.4	116.4	104.3	32.3	70.9	47.4	-2.6
Alexandria	363.5	50.5	54.8	16.2	37.2	23.8	-1.3
Port-Said	48.5	6.7	7.5	2.5	5.1	3.6	-0.2
Suez	45.7	6.4	6.0	2.1	4.1	3.1	-0.1
Damietta	88.6	12.3	12.7	5.3	10.6	7.7	-0.4
Dakahleya	278.9	38.8	48.4	23.0	49.8	33.7	-1.8
Sharkeya	305.2	42.4	43.0	20.0	47.2	29.3	-1.7
Kalyoubeya	298.5	41.5	32.8	13.9	31.4	20.4	-1.1
Kafr-El-Sheikh	152.2	21.2	30.3	12.0	27.4	17.5	-1.0
Gharbeya	236.0	32.8	37.2	19.1	41.8	27.9	-1.5
Menofeya	194.3	27.0	28.2	14.4	10.6	21.1	-0.4
El Behera	270.2	37.6	43.5	19.1	46.1	28.0	-1.7
Ismailia	80.8	11.2	10.7	3.4	7.8	4.9	-0.3
Giza	500.5	69.6	52.7	19.5	44.4	28.6	-1.6
Beni Suef	161.2	22.4	18.1	8.8	20.4	12.9	-0.7
Fayoum	190.9	26.5	20.4	10.5	23.2	15.3	-0.8
Menya	298.7	41.5	33.5	16.3	37.8	23.8	-1.4
Assyout	280.8	39.0	27.3	12.7	30.8	18.6	-1.1
Souhag	334.2	46.4	29.9	14.2	33.8	20.8	-1.2
Kena	270.4	37.6	25.0	12.2	28.2	17.9	-1.0
Assouan	136.5	19.0	17.2	5.0	11.7	7.4	-0.4
Luxor	50.4	7.0	4.0	1.9	4.3	2.8	-0.2
Red Sea	24.3	3.4	2.0	0.7	1.3	1.0	0.0
Wadi-El-Gedid	16.5	2.3	1.6	0.8	1.5	1.2	-0.1
Matrouh	37.2	5.2	3.4	0.8	2.3	1.2	-0.1
North of Sinai	42.3	5.9	3.3	1.1	2.5	1.6	-0.1
South of Sinai	12.4	1.7	0.5	0.1	0.3	0.2	0.0
Total	**5556.0**	**772.2**	**699**	**288**	**633**	**422**	**-23**

Source: General Authority for Supply Commodities and authors' calculations.

Table 8: Food Subsidies, by Governorate, 2008/09

(Million LE)

Governorate	Wheat flour for bakeries	Wheat flour for direct consumption	Cooking Oil	Addidtional Cooking Oil	Sugar	Sugar Addidtional	All Sugar	Rice
Cairo	1742.3	190.7	200.3	115.1	91.5	38.5	154.4	51.5
Alexandria	747.6	81.8	117.9	61.2	84.7	20.5	111.8	27.4
Port-Said	94.1	10.3	15.5	10.0	11.1	3.3	16.0	4.5
Suez	92.0	10.1	14.2	8.7	7.6	2.9	12.2	3.9
Damietta	174.1	19.1	37.1	22.9	26.7	7.7	37.7	10.3
Dakahleya	592.6	64.9	171.7	104.2	123.4	34.9	173.2	46.6
Sharkeya	761.2	83.3	169.0	91.6	121.4	30.7	162.9	41.0
Kalyoubeya	750.0	82.1	121.8	60.8	87.5	20.3	113.8	27.2
Kafr-El-Sheikh	315.5	34.5	93.7	54.3	67.3	18.2	92.8	24.3
Gharbeya	541.4	59.3	139.9	85.1	100.6	28.5	141.3	38.1
Menofeya	432.6	47.4	108.9	65.1	78.3	21.8	109.2	29.2
El Behera	598.0	65.5	160.6	91.1	115.4	30.5	157.6	40.8
Ismailia	179.4	19.6	26.9	14.6	19.3	4.9	26.0	6.6
Giza	1135.1	124.3	69.5	39.9	50.0	13.4	68.6	17.9
Beni Suef	340.1	37.2	74.9	38.6	53.8	12.9	70.8	17.3
Fayoum	418.7	45.8	86.5	48.5	62.1	16.2	84.5	21.7
Menya	667.2	73.0	142.2	68.8	102.2	23.0	131.4	30.8
Assyout	608.1	66.6	116.2	51.1	57.3	17.1	82.3	22.9
Souhag	665.3	72.8	125.4	59.8	90.1	20.0	115.3	26.8
Kena	502.1	55.0	102.8	56.0	73.9	18.8	99.3	25.1
Assouan	273.3	29.9	41.1	22.8	29.5	7.6	40.0	10.2
Luxor	106.4	11.6	15.8	8.4	11.4	2.8	15.1	3.8
Red Sea	52.5	5.7	5.0	2.9	3.6	1.0	4.9	1.3
Wadi-El-Gedid	36.1	4.0	6.0	4.0	4.3	1.4	6.3	1.8
Matrouh	75.9	8.3	9.0	3.6	6.5	1.2	7.8	1.6
North of Sinai	94.7	10.4	10.6	5.3	7.6	1.8	9.9	2.4
South of Sinai	25.7	2.8	1.4	0.7	1.0	0.2	1.3	0.3
Helwan	-	-	43.0	23.5	30.9	7.9	41.6	10.5
6th of October	-	-	59.8	33.5	43.0	11.2	58.4	15.0
Total	12022	1316	2287	1252	1562	419	2147	561

Source: General Authority for Supply Commodities and authors' calculations.

Table 9: Ration Cards Holders: Number of Households and Individuals, 2008/09

Governorates	Number				Share to Total			
	2008/2009		2004/05		2004/05		2008/2009	
	Households	Persons	Households	Persons	Households	Persons	Households	Persons
Cairo	1094975	5551915	1135644	4348275	11.0%	11.0%	9.3%	8.8%
Alexandria	568905	3233324	544199	2264383	5.3%	5.7%	4.8%	5.1%
Port-Said	96675	418277	98516	307279	1.0%	0.8%	0.8%	0.7%
Suez	83180	402269	82379	260690	0.8%	0.7%	0.7%	0.6%
Dakahleya	997715	4685983	895647	2990451	8.7%	7.6%	8.4%	7.4%
Gharbeya	814493	3871672	698896	2482965	6.8%	6.3%	6.9%	6.1%
Sharkeya	859574	4627919	689368	2830948	6.7%	7.2%	7.3%	7.3%
Menofeya	623025	2994299	532427	1908995	5.1%	4.8%	5.3%	4.7%
Kafr-El-Sheikh	517593	2575018	430072	1638122	4.2%	4.2%	4.4%	4.1%
El Behera	852404	4420334	662236	2775596	6.4%	7.0%	7.2%	7.0%
Damietta	231629	1014680	222012	653359	2.1%	1.7%	2.0%	1.6%
Giza	375969	2079230	690558	2697303	6.7%	6.8%	3.2%	3.3%
Kalyoubeya	568361	3098594	499280	1915471	4.8%	4.9%	4.8%	4.9%
Matrouh	34226	251815	29017	140977	0.3%	0.4%	0.3%	0.4%
North of Sinai	51663	288981	44517	156886	0.4%	0.4%	0.4%	0.5%
South of Sinai	6945	39395	5255	21720	0.1%	0.1%	0.1%	0.1%
Ismailia	136694	775775	116147	477791	1.1%	1.2%	1.2%	1.2%
Menya	631938	3974441	574495	2264335	5.6%	5.7%	5.4%	6.3%
Red Sea	29307	140009	25131	86673	0.2%	0.2%	0.2%	0.2%
Beni Suef	357876	2110892	313060	1221350	3.0%	3.1%	3.0%	3.3%
Fayoum	458035	2387045	386506	1379024	3.7%	3.5%	3.9%	3.8%
Assyout	484314	3188918	440723	1838226	4.3%	4.7%	4.1%	5.0%
Souhag	548664	3513618	493482	2015352	4.8%	5.1%	4.6%	5.6%
Kena	487451	2852001	441143	1694555	4.3%	4.3%	4.1%	4.5%
Assouan	222464	1125896	187069	692697	1.8%	1.8%	1.9%	1.8%
Wadi-El-Gedid	39983	165485	35301	101229	0.3%	0.3%	0.3%	0.3%
Luxor	79822	440202	69976	262647	0.7%	0.7%	0.7%	0.7%
Helwan	229271	1213923	0	0	0.0%	0.0%	1.9%	1.9%
6 of October	328480	1735374	0	0	0.0%	0.0%	2.8%	2.7%
Total	11811631	63177284	10343056	39427299	100.0%	100.0%	100.0%	100.0%

Source: MOSS.

Table 10: Ration Cards Holders: Number Individuals, July 2008 – June 2009

	2008/09	
	Number of Cards	**Number of Individuals**
Jul-08	11874410	57549738
Aug-08	11603534	59475429
Sep-08	11761491	60223278
Oct-08	11036495	62894792
Nov-08	11036495	62894792
Dec-08	11822619	62693724
Jan-09	11805540	63114465
Feb-09	11820430	63124843
Mar-09	11819460	62294762
Apr-09	11817123	63219104
May-09	11812246	63196454
Jun-09	11807667	63156347

Source: MOSS.

Table 11: Number of Bakeries, by Governorate, 2004-May2009

Governorate	2004	2005	2006	2007	2008	May-09
Cairo	1323	1471	1517	1534	1534	1749
Alexandria	1016	1066	1106	1118	1177	1192
Port-Said	68	69	73	73	73	75
Suez	103	115	128	130	128	132
Damietta	277	301	310	326	331	340
Dakahleya	564	844	891	893	1062	1105
Sharkeya	845	1053	1223	1259	1360	1389
Kalyoubeya	1226	1252	1407	1412	1412	1421
Kafr-El-Sheikh	345	405	558	559	559	587
Gharbeya	630	649	786	826	895	915
Menoufeya	757	883	909	918	973	966
El Behera	569	600	677	661	708	764
Ismailia	258	255	291	302	324	326
Giza	985	931	1110	1177	1241	1096
Beni Suef	496	579	678	765	794	794
Fayoum	428	421	475	475	521	521
Menya	1254	1297	1670	1700	1719	1729
Assyout	1059	1067	1065	1063	1077	1078
Souhag	746	786	829	833	874	916
Kena	393	396	396	419	435	446
Assouan	270	273	306	307	336	339
Luxor	119	120	133	136	149	175
Red Sea	63	67	67	66	73	73
Wadi-El-Gedid	40	45	49	55	55	63
Matrouh	96	97	104	107	111	111
North of Sinai	69	74	80	79	88	95
South of Sinai	24	26	26	26	30	30
Helwan	0	0	0	0	0	401
6 of October	0	0	0	0	0	507
Total	14023	15142	16864	17219	18039	18427

Source: MOSS.

Table 12: Number of Wheat Flour Warehouses, by Governorate, 2004-2008

Governorate	2004	2005	2006	2007	2008
Cairo	0	0	0	0	0
Alexandria	130	132	129	128	127
Port-Said	0	0	0	0	0
Suez	26	25	25	25	24
Damietta	232	233	234	234	234
Dakahleya	249	246	247	232	0
Sharkeya	179	12	12	12	12
Kalyoubeya	195	194	195	194	0
Kafr-El-Sheikh	655	655	672	907	907
Gharbeya	543	517	513	513	513
Menofeya	474	467	503	502	502
El Behera	1544	1274	1434	1434	1434
Ismailia	273	272	272	266	0
Giza	2370	2370	2370	2256	2260
Beni Suef	67	46	63	59	0
Fayoum	1084	1084	1084	1090	1090
Menya	0	15	15	0	0
Assyout	1123	1092	1102	1115	1115
Souhag	3863	3863	3398	3398	3398
Kena	2884	2843	2852	2854	2884
Assouan	1424	1342	1343	1343	1361
Luxor	455	452	455	484	484
Red Sea	38	43	44	43	43
Wadi-El-Gedid	37	39	39	40	40
Matrouh	159	181	181	180	180
North of Sinai	169	197	194	192	192
South of Sinai	34	9	9	9	9
Total	18207	17603	17385	17510	16809

Source: MOSS.

Table 13: Government Cost Subsidy Ratio and Consumer Benfeift Subsidy Ratio, 2004/05 and 2008/09

	2008/09						2004/05*					
	GASC			Consumers (HIECS)			GASC			Consumers (HIECS)		
	cost	price	government subsidy ratio%	survey market median price	survey subsidized price	consumer benefit subsidy ratio%	cost	price	government subsidy ratio%	survey market median price	survey subsidized price	consumer benefit subsidy ratio%
Bladi Bread loaf****	0.26	0.05	80.80	0.27	0.05	81.48	0.17	0.05	69.90	0.23	0.05	77.84
Baladi Wheat Flour**	2.16	0.60	77.20	3.00	0.60	80.00	1.35	0.60	63.70			
Cooking Oil ***	6.50	1.00	84.60	9.50	2.03	78.63	4.90	1.00	79.58	5.00	2.25	55.00
Additional cooking Oil	7.32	4.25	41.92				4.68	3.50	25.20			
Sugar ***	2.59	0.60	76.85	3.00	0.85	71.67	1.84	0.60	67.33	2.25	0.60	73.33
Additional Sugar	2.59	1.75	32.48				.	.	.	.	.	.
Rice	1.90	1.50	20.92	3.00	1.00	66.67	2.00	1.00	49.97	2.00	1.00	50.00
Tea	11.49	13.00	-13.12	25.00	13.00	48.00	11.28	13.00	-15.24	20.00	13.00	35.00

Source: GASC, MOSS and author's Calculation**.**

Table 14: Shares of Food Subsidy Benefits, Population and Poverty, by Governorate, 2008-09

Governorate	Allocation of all food subsidies	Consumer benefits from all food subsidies	Allocation of Bread subsidies	Consumer benefits from Bread subsidies	Allocation of RC subsidies	Consumer benefits from RC subsidies	contribution to poverty	population share
Cairo	13.1	10.3	14.5	12.2	10.1	8.1	3.6	10.2
Alexandria	5.9	5.0	6.2	6.7	5.1	3.1	1.6	5.4
Port-Said	0.8	0.7	0.8	0.6	0.7	0.9	0.2	0.8
Suez	0.7	0.8	0.8	1.0	0.6	0.7	0.1	0.6
Metropolitan	20.5	17.0	22.3	20.5	16.5	12.8	5.4	17.0
Damietta	1.5	1.4	1.4	1.7	1.7	1.1	0.1	1.4
Dakahleya	5.9	5.6	4.9	4.9	7.9	6.4	2.8	6.6
Sharkeya	6.7	6.9	6.3	6.7	7.5	7.1	6.2	7.0
Kalyoubeya	5.9	7.4	6.2	9.3	5.2	5.2	3.3	6.2
Kafr-El-Sheikh	3.1	3.1	2.6	3.2	4.2	3.0	2.3	4.4
Gharbeya	5.1	5.5	4.5	4.8	6.4	6.3	2.0	5.6
Menofeya	4.0	4.3	3.6	4.7	5.0	3.9	3.7	4.5
El Behera	5.7	4.7	5.0	4.3	7.2	5.2	6.9	6.4
Ismailia	1.4	1.3	1.5	1.5	1.2	1.0	1.2	1.3
Lower Egypt	39.3	40.2	36.1	41.2	46.4	39.1	28.5	43.3
Giza	8.3	8.5	9.4	10.2	5.8	6.4	9.1	8.5
Beni Suef	3.0	3.1	2.8	3.9	3.2	2.3	6.2	3.2
Fayoum	3.6	4.6	3.5	3.4	3.9	6.0	5.2	3.9
Menya	5.7	6.9	5.5	8.2	6.0	5.3	9.1	6.3
Assyout	4.8	4.4	5.1	5.3	4.4	3.3	13.6	4.8
Souhag	5.5	5.7	5.5	2.7	5.3	9.3	11.1	5.0
Kena	4.3	4.8	4.2	1.1	4.5	9.2	7.6	4.2
Assouan	2.1	2.3	2.3	1.3	1.8	3.5	3.0	1.6
Luxor	0.8	0.9	0.9	0.5	0.7	1.3	0.5	0.5
Upper Egypt	38.1	41.3	39.2	36.8	35.7	46.6	65.3	38.1
Red Sea	0.4	0.3	0.4	0.5	0.2	0.1	0.1	0.3
Wadi-El-Gedid	0.3	0.2	0.3	0.2	0.3	0.2	0.1	0.3
Matrouh	0.5	0.3	0.6	0.4	0.4	0.2	0.1	0.4
North of Sinai	0.7	0.5	0.8	0.3	0.5	0.8	0.6	0.4
South of Sinai	0.2	0.1	0.2	0.2	0.1	0.0	0.0	0.1
Frontier Gov	2.1	1.5	2.4	1.6	1.4	1.4	0.8	1.5
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: GASC, MOSS

Table 15: Urban and Rural Allocations of nominal Per Capita Food Subsidy Benefits, by Governorates, 1997, 2004/05 and 2008/09

									LE/person/year
	2008 / 09			2004 / 05			1997		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Cairo	278.4		278.4	112.4		112.4	94.6		94.6
Alexandria	257.4		257.4	119.2		119.2	74.4		74.4
Port Said	273.7		273.7	127.0		127.0	67.6		67.6
Suez	361.3		361.3	148.5		148.5	65.4		65.4
Metropolitan	**274.6**		**274.6**	**116.5**		**116.5**	**86.2**	**0.0**	**86.2**
Damietta	291.8	295.9	294.4	146.8	131.3	135.6	139.2	54.3	77.6
Dakahlia	291.9	215.0	236.0	122.2	90.1	99.7	80.3	17.2	34.8
Sharkia	314.6	259.5	272.0	118.1	79.1	88.0	115.0	11.9	35.2
Qualiobia	327.4	327.0	327.2	139.2	132.8	135.5	79.9	39.1	55.7
Kafr el Sheikh	270.7	177.0	195.8	114.8	71.6	81.2	69.8	20.4	31.7
Garbeyya	264.2	276.6	273.0	105.3	72.0	82.5	95.2	21.3	44.2
Menoufia	312.6	256.6	267.1	119.6	93.9	98.7	165.9	34.3	60.5
Beheira	255.8	196.0	207.2	92.8	57.4	66.5	88.0	20.1	35.6
Ismailia	287.3	245.2	263.3	123.4	132.5	127.9	104.0	36.8	68.8
Lower Egypt	**295.0**	**243.5**	**257.2**	**118.7**	**86.5**	**95.6**	**97.2**	**23.6**	**43.8**
Giza	251.0	306.2	274.7	114.2	118.2	115.8	68.4	58.9	64.0
Bani Suef	310.8	252.5	266.7	149.3	139.6	141.8	114.7	13.3	37.2
Fayoum	330.6	324.1	325.5	122.9	75.7	86.2	134.6	32.9	55.8
Menia	357.1	288.5	299.4	184.8	162.1	166.4	134.7	27.4	48.3
Assiut	314.8	237.4	256.3	149.6	95.2	111.3	117.0	30.2	53.8
Sohag	348.7	308.1	316.5	85.7	41.7	51.1	105.2	37.4	52.2
Qena	337.0	313.0	318.0	65.0	49.9	53.0	138.6	50.5	69.2
Aswan	380.6	418.3	402.6	126.3	77.8	97.9	110.7	70.9	70.5
luxor	431.3	483.5	457.6	111.3	60.4	85.0	70.5	0.0	87.9
Upper Egypt	**303.7**	**297.3**	**299.2**	**122.0**	**97.0**	**105.0**	**98.9**	**38.0**	**57.3**
Red Sea	292.2	292.6	292.2	91.4	59.3	85.0			
New Valley	221.3	224.0	222.8	134.3	49.6	86.9			
Matrouh	233.3	208.4	225.3	124.4	68.9	98.8			
North Sinai	353.3	324.8	341.3	120.7	37.3	85.3			
South Sinai	206.7	224.9	215.3	111.6	102.2	107.4			
Border Gov	**279.0**	**259.0**	**272.1**	**116.1**	**56.9**	**90.9**	**97.5**	**38.5**	**74.5**
Total	**288.6**	**268.0**	**276.4**	**118.6**	**90.9**	**102.9**	**92.9**	**30.0**	**57.0**

Source: GASC, MOSS

Table 16: Share of All Households Purchasing Subsidized Sugar and Cooking Oil, by Region and Expenditure Quintile, (percent of all survey households)

	2008/09						2004/05					
	poorest Q	2nd Q	3rd Q	4the Q	richest Q	Average	poorest Q	2nd Q	3rd Q	4the Q	richest Q	Average
Cooking Oil												
Metropolitan	49.2	50.3	50.7	50.8	45.2	47.5	43.9	48.6	46.5	48.3	39.3	42.9
Lower Urban	70.6	67.3	65.1	60.7	51.7	59.1	56.5	58.4	57.1	56.1	51.1	55.0
Lower Rural	75.7	73.3	73.3	72.1	67.9	72.2	63.8	65.7	68.9	68.2	63.5	66.5
Upper Urban	64.7	60.4	59.3	53.7	43.9	54.2	61.2	54.6	59.5	52.9	40.8	51.2
Upper Rural	73.3	70.3	68.1	64.9	62.5	69.5	62.0	62.5	61.5	65.1	61.0	62.4
All Egypt	**71.3**	**68.6**	**66.9**	**62.7**	**51.8**	**62.6**	**61.2**	**61.3**	**61.8**	**59.6**	**47.3**	**57.1**
Sugar												
Metropolitan	50.0	50.3	50.7	50.5	45.5	47.7	45.7	49.0	47.1	49.1	40.2	43.8
Lower Urban	71.6	67.4	65.1	61.6	52.5	59.7	56.5	58.5	58.0	57.0	51.5	55.6
Lower Rural	76.5	74.6	74.1	72.8	68.7	73.1	64.1	66.2	69.4	68.6	64.7	67.1
Upper Urban	63.3	59.8	58.0	53.7	45.1	54.1	62.1	54.7	59.9	53.4	41.4	51.6
Upper Rural	72.1	69.6	67.2	63.2	60.3	68.3	63.1	63.5	62.9	65.7	61.6	63.4
All Egypt	**70.7**	**68.7**	**66.9**	**62.8**	**52.2**	**62.7**	**62.0**	**61.9**	**62.5**	**60.2**	**48.1**	**57.8**

Source: GASC, MOSS

Table 17: Purchases of Subsidized Baladi Bread , 2008/09

	Share of Households purchasing of total housholds	Loaves of baladi bread purchased				
		Average Quantity (of HH who Purchase) (number/person/day)		Average Quantity (of all HH) (number/person/day)		Average weight of loaves
		Mean	STE	Mean	STE	
Metropolitan	85.3	3.0	0.008	2.6	0.009	123.1
Lower Urban	89.5	3.0	0.009	2.7	0.010	111.2
Lower Rural	79.4	2.3	0.006	1.8	0.006	112.4
Upper Urban	83.4	3.0	0.011	2.6	0.011	113.2
Upper Rural	74.0	2.5	0.007	1.8	0.007	125.7
Borders Urban	87.9	3.1	0.033	2.7	0.036	
Borders Rural	48.7	2.8	0.080	1.3	0.056	
All Egypt	81.0	2.6	0.004	2.1	0.004	118.3

Source: GASC, MOSS

Table 18: Purchases of Subsidized Baladi Bread, 2004/05

	Share of Households purchasing of total housholds	Loaves of baladi bread purchased			
		Average Quantity (of HH who Purchase)		Average Quantity (of all HH)	
		(number/person/day)			
		Mean	STE	Mean	STE
Metropolitan	79.7	2.8	0.008	2.3	0.008
Lower Urban	90.3	2.5	0.009	2.2	0.009
Lower Rural	74.5	1.7	0.006	1.2	0.005
Upper Urban	78.4	3.0	0.012	2.4	0.012
Upper Rural	65.5	2.5	0.009	1.7	0.008
Borders Urban	82.3	2.9	0.038	2.4	0.043
Borders Rural	40.5	2.0	0.074	0.7	0.039
All Egypt	75.9	2.4	0.004	1.8	0.004

Source: GASC, MOSS

Table 19: Purchases of Subsidized Wheat Flour, 2008/09

	Share of Households purchasing of total housholds	Average Quantity (of HH who Purchase)		Average Quantity (of all HH)	
		(Kg/person/year)			
		Mean	STE	Mean	STE
Metropolitan	0.8	11.8	1.5	0.1	0.01
Lower Urban	0.6	15.2	0.9	0.1	0.01
Lower Rural	0.9	29.4	0.8	0.3	0.01
Upper Urban	13.9	92.3	0.8	15.4	0.25
Upper Rural	31.8	82.6	0.3	28.2	0.20
Borders Urban	17.6	92.1	2.7	17.6	0.93
Borders Rural	38.3	127.5	3.4	51.6	2.30
All Egypt	9.9	82.3	0.3	9.9	0.07

Source: GASC, MOSS

Table 20: Purchases of Subsidized Rationed Sugar, 2008/09

	Share of Households purchasing of total housholds	Average Quantity (of HH who Purchase) (Kg/person/year)		Average Quantity (of all HH) (Kg/person/year)	
		Mean	STE	Mean	STE
Metropolitan	47.7	20.5	0.09	10.1	0.07
Lower Urban	59.7	20.4	0.08	12.6	0.08
Lower Rural	73.1	19.7	0.04	15.0	0.04
Upper Urban	54.1	20.6	0.09	11.8	0.08
Upper Rural	68.3	19.3	0.05	14.0	0.05
Borders Urban	46.8	16.8	0.25	8.6	0.22
Borders Rural	63.1	16.1	0.26	10.9	0.28
All Egypt	62.7	19.8	0.03	13.2	0.03

Source: GASC, MOSS

Table 21: Purchases of Subsidized Rationed Sugar, 2004/05

	Share of Households purchasing of total housholds	Average Quantity (of HH who Purchase) (Kg/person/year)		Average Quantity (of all HH) (Kg/person/year)	
		Mean	STE	Mean	STE
Metropolitan	43.8	10.1	0.05	4.7	0.03
Lower Urban	55.6	9.1	0.04	5.3	0.04
Lower Rural	67.1	8.4	0.02	6.0	0.02
Upper Urban	51.6	9.5	0.05	5.3	0.04
Upper Rural	63.4	8.3	0.03	5.7	0.03
Borders Urban	48.8	7.2	0.14	4.0	0.12
Borders Rural	54.1	6.3	0.13	4.0	0.12
All Egypt	57.8	8.8	0.02	5.5	0.01

Source: GASC, MOSS

Table 22: Purchases of Subsidized Rationed Cooking Oil, 2008/09

	Share of Households purchasing of total housholds	Average Quantity (of HH who Purchase) (Kg/person/year)		Average Quantity (of all HH) (Kg/person/year)	
		Mean	STE	Mean	STE
Metropolitan	47.5	14.9	0.07	7.4	0.05
Lower Urban	59.1	12.4	0.06	7.6	0.05
Lower Rural	72.2	11.1	0.03	8.3	0.03
Upper Urban	54.2	10.7	0.06	6.2	0.05
Upper Rural	69.5	8.5	0.03	6.3	0.03
Borders Urban	45.3	11.4	0.16	5.6	0.15
Borders Rural	64.0	10.2	0.16	7.1	0.18
All Egypt	62.6	10.9	0.02	7.3	0.02

Source: GASC, MOSS

Table 23: Purchases of Subsidized Rationed Cooking Oil, 2004/05

	Share of Households purchasing of total housholds	Average Quantity (of HH who Purchase) (Kg/person/year)		Average Quantity (of all HH) (Kg/person/year)	
		Mean	STE	Mean	STE
Metropolitan	42.9	8.4	0.035	3.8	0.027
Lower Urban	55.0	6.6	0.03	3.8	0.027
Lower Rural	66.5	5.8	0.017	4.1	0.016
Upper Urban	51.2	6.7	0.036	3.7	0.029
Upper Rural	62.5	5.4	0.02	3.6	0.017
Borders Urban	47.9	5.4	0.103	3.0	0.09
Borders Rural	54.1	5.3	0.112	3.4	0.105
All Egypt	57.1	6.2	0.011	3.8	0.01

Source: GASC, MOSS

Table 24: Purchases of Subsidized Rationed Rice, 2008/09

	Share of Households purchasing of total housholds	Average Quantity (of HH who Purchase)		Average Quantity (of all HH)	
		(Kg/person/year)			
		Mean	STE	Mean	STE
Metropolitan	44.8	10.3	0.07	22.2	0.10
Lower Urban	49.2	12.9	0.10	25.4	0.12
Lower Rural	57.6	13.9	0.06	23.4	0.07
Upper Urban	52.6	8.9	0.07	15.9	0.07
Upper Rural	67.5	9.6	0.04	13.4	0.04
Borders Urban	42.1	9.5	0.27	20.3	0.34
Borders Rural	56.8	12.4	0.38	20.4	0.41
All Egypt	55.5	11.4	0.03	19.3	0.03

Source: GASC, MOSS

Table 25: Purchases of Subsidized Rationed Rice, 2004/05

	Share of Households purchasing of total housholds	Average Quantity (of HH who Purchase)		Average Quantity (of all HH)	
		(Kg/person/year)			
		Mean	STE	Mean	STE
Metropolitan	43.0	9.2	0.04	4.2	0.03
Lower Urban	54.1	8.5	0.04	4.8	0.04
Lower Rural	64.1	7.9	0.03	5.3	0.03
Upper Urban	51.1	8.0	0.04	4.4	0.03
Upper Rural	62.6	6.8	0.02	4.6	0.02
Borders Urban	47.9	6.6	0.11	3.6	0.11
Borders Rural	54.1	5.7	0.11	3.7	0.11
All Egypt	56.3	7.8	0.02	4.7	0.01

Source: GASC, MOSS

Table 26: Per Capita Annual Baladi Bread Subsidy Benefits Accruing to Expenditure Quintile Groups, by Region, and Benefits to Non needy, 2004/05

	Expenditure Quintiles					Average	Top 3 Quintiles
	poorest Q	2nd Q	3rd Q	4the Q	richest Q		
All Egypt							
Absolute benefits (LE)	59.1	60.4	64.0	72.6	77.5	66.7	
Percent of total benefits	17.7	18.1	19.2	21.8	23.2	100	64.2
Percent of population	20	20	20	20	20	100	
Metropolitan							
Absolute benefits (LE)	85.0	93.6	93.3	91.1	78.4	85.3	
Percent of total benefits within region	5.2	10.7	15.6	24.9	43.6	100	84.1
Percent of total benefits nationally	1.3	2.5	3.7	5.9	10.4	23.9	
Percent of population within region	5.3	9.7	14.3	23.3	47.4	100	
Percent of population nationally	1.0	1.8	2.7	4.4	8.9	18.7	
Lower Urban							
Absolute benefits (LE)	79.1	78.5	80.9	84.9	86.6	82.9	
Percent of total benefits within region	9.3	15.7	20.7	27.8	26.5	100	75.0
Percent of total benefits nationally	1.4	2.4	3.1	4.2	4.0	15.1	
Percent of population within region	9.8	16.6	21.2	27.1	25.3	100	
Percent of population nationally	1.2	2.0	2.6	3.3	3.1	12.1	
Lower Rural							
Absolute benefits (LE)	38.6	131.7	142.0	151.8	172.1	142.9	
Percent of total benefits within region	13.5	22.1	27.8	25.1	13.8	100	66.8
Percent of total benefits nationally	2.9	5.8	7.4	6.7	3.7	26.5	
Percent of population within region	16.0	23.9	28.0	23.6	11.5	100	
Percent of population nationally	4.9	7.8	8.2	6.7	3.1	30.8	
Upper Urban							
Absolute benefits (LE)	87.4	87.2	93.3	94.9	80.5	88.2	
Percent of total benefits within region	18.7	16.6	19.5	21.6	23.6	100	64.7
Percent of total benefits nationally	2.9	2.6	3.1	3.4	3.7	15.7	
Percent of population within region	18.9	16.7	18.4	20.1	25.9	100	
Percent of population nationally	2.2	2.0	2.2	2.4	3.1	11.9	
Upper Rural							
Absolute benefits (LE)	58.8	60.9	57.4	64.3	77.0	60.8	
Percent of total benefits within region	40.0	24.9	15.6	12.4	7.2	100	35.1
Percent of total benefits nationally	9.2	5.8	3.6	2.9	1.7	23.1	
Percent of population within region	41.3	24.8	16.5	11.7	5.7	100	
Percent of population nationally	10.5	6.3	4.2	3.0	1.4	25.4	

Source: GASC, MOSS

Table 27: Per Capita Annual Baladi Bread Subsidy Benefits Accruing to Expenditure Quintile Groups, by Region, and Benefits to Non needy, 2008/09

	Expenditure Quintiles					Average	Top 3 Quintiles
	poorest Q	2nd Q	3rd Q	4the Q	richest Q		
All Egypt							
Absolute benefits (LE)	123.0	134.9	146.9	164.4	167.8	147.4	
Percent of total benefits	16.7	18.3	19.9	22.3	22.8	100	65.0
Percent of population	20	20	20	20	20	100	
Metropolitan							
Absolute benefits (LE)	176.6	186.2	186.2	189.5	167.0	177.2	
Percent of total benefits within region	5.6	9.1	14.4	25.4	45.5	100	85.3
Percent of total benefits nationally	1.2	1.9	3.0	5.2	9.3	20.5	
Percent of population within region	5.6	8.7	13.7	23.7	48.3	100	
Percent of population nationally	1.0	1.5	2.3	4.0	8.2	17.0	
Lower Urban							
Absolute benefits (LE)	150.9	180.7	192.6	197.6	186.4	187.4	
Percent of total benefits within region	5.7	13.6	20.8	29.0	30.9	100	80.7
Percent of total benefits nationally	0.8	2.0	3.1	4.3	4.5	14.7	
Percent of population within region	7.1	14.1	20.2	27.5	31.1	100	
Percent of population nationally	0.8	1.6	2.3	3.2	3.6	11.5	
Lower Rural							
Absolute benefits (LE)	106.1	113.3	122.1	130.6	148.1	122.9	
Percent of total benefits within region	11.2	22.1	27.8	25.1	13.8	100	66.8
Percent of total benefits nationally	3.0	5.8	7.4	6.7	3.7	26.5	
Percent of population within region	13.0	23.9	28.0	23.6	11.5	100	
Percent of population nationally	4.1	7.6	8.9	7.5	3.6	31.8	
Upper Urban							
Absolute benefits (LE)	167.6	172.7	184.7	194.0	168.1	176.6	
Percent of total benefits within region	20.5	18.1	17.3	21.4	22.7	100	61.4
Percent of total benefits nationally	2.8	2.5	2.4	2.9	3.1	13.8	
Percent of population within region	21.7	18.5	16.5	19.5	23.9	100	
Percent of population nationally	2.5	2.1	1.9	2.2	2.7	11.5	
Upper Rural							
Absolute benefits (LE)	113.6	126.3	135.9	153.4	171.6	127.3	
Percent of total benefits within region	38.4	25.9	17.1	11.8	6.7	100	35.7
Percent of total benefits nationally	8.8	6.0	3.9	2.7	1.6	23.0	
Percent of population within region	43.0	26.1	16.0	9.8	5.0	100	
Percent of population nationally	11.5	7.0	4.3	2.6	1.3	26.7	

Source: GASC, MOSS

Table 28: Per Capita Annual Wheat Flour Subsidy Benefits Accruing to Expenditure Quintile Groups, by Region, and Benefits to Non needy, 2008/09

	Expenditure Quintiles					Average	Top 3 Quintiles
	poorest Q	2nd Q	3rd Q	4the Q	richest Q		
All Egypt							
Absolute benefits (LE)	45.0	29.8	19.2	13.6	7.7	23.1	
Percent of total benefits	39.0	25.8	16.6	11.8	6.7	100	35.2
Percent of population	20	20	20	20	20	100	
Metropolitan							
Absolute benefits (LE)	0.0	0.1	0.2	0.3	0.4	0.3	
Percent of total benefits within region	0.5	2.0	10.1	22.8	64.6	100	97.5
Percent of total benefits nationally	0.0	0.0	0.0	0.1	0.2	0.2	
Percent of population within region	5.6	8.7	13.7	23.7	48.3	100	
Percent of population nationally	1.0	1.5	2.3	4.0	8.2	17.0	
Lower Urban							
Absolute benefits (LE)	1.0	0.2	0.3	0.3	0.1	0.3	
Percent of total benefits within region	25.5	12.4	24.0	26.8	11.4	100	62.1
Percent of total benefits nationally	0.0	0.0	0.0	0.0	0.0	0.1	
Percent of population within region	7.1	14.1	20.2	27.5	31.1	100	
Percent of population nationally	0.8	1.6	2.3	3.2	3.6	11.5	
Lower Rural							
Absolute benefits (LE)	0.7	0.9	0.8	0.7	0.4	0.8	
Percent of total benefits within region	12.9	28.8	31.3	21.0	6.0	100	58.4
Percent of total benefits nationally	0.1	0.3	0.3	0.2	0.1	1.0	
Percent of population within region	13.0	23.9	28.0	23.6	11.5	100	
Percent of population nationally	4.1	7.6	8.9	7.5	3.6	31.8	
Upper Urban							
Absolute benefits (LE)	53.3	50.1	39.2	30.8	15.4	36.9	
Percent of total benefits within region	31.2	25.1	17.5	16.2	10	100	43.7
Percent of total benefits nationally	5.8	4.6	3.2	3.0	1.8	18.4	
Percent of population within region	21.7	18.5	16.5	19.5	23.9	100	
Percent of population nationally	2.5	2.1	1.9	2.2	2.7	11.5	
Upper Rural							
Absolute benefits (LE)	65.5	67.4	68.8	73.0	76.1	67.8	
Percent of total benefits within region	41.6	26.0	16.3	10.6	5.6	100	32.5
Percent of total benefits nationally	32.6	20.4	12.7	8.3	4.4	78.3	
Percent of population within region	43.0	26.1	16.0	9.8	5	100	
Percent of population nationally	11.5	7.0	4.3	2.6	1.3	26.7	

Source: GASC, MOSS

Table 29: Per Capita Annual Sugar Subsidy Benefits Accruing to Expenditure Quintile Groups, by Region, and Benefits to Non needy, 2004-05

	Expenditure Quintiles					Average	Top 3 Quintiles
	poorest Q	2nd Q	3rd Q	4the Q	richest Q		
All Egypt							
Absolute benefits (LE)	7.4	8.5	9.4	10.2	9.6	9.0	
Percent of total benefits	16.3	18.9	20.9	22.6	21.3	100	64.8
Percent of population	20	20	20	20	20	100	
Metropolitan							
Absolute benefits (LE)	5.9	6.9	7.6	8.2	7.9	7.7	
Percent of total benefits within region	4.0	8.7	14.1	24.8	48.5	100	87.3
Percent of total benefits nationally	0.6	1.4	2.3	4.0	7.7	16.0	
Percent of population within region	5.3	9.7	14.3	23.3	47.4	100	
Percent of population nationally	1.0	1.8	2.7	4.4	8.9	18.7	
Lower Urban							
Absolute benefits (LE)	7.1	7.8	8.3	8.9	9.9	8.7	
Percent of total benefits within region	8.0	14.9	20.3	28.0	28.8	100	77.1
Percent of total benefits nationally	0.9	1.7	2.4	3.3	3.4	11.7	
Percent of population within region	9.8	16.6	21.2	27.1	25.3	100	
Percent of population nationally	1.2	2.0	2.6	3.3	3.1	12.1	
Lower Rural							
Absolute benefits (LE)	7.6	131.7	142.0	151.8	172.1	142.9	
Percent of total benefits within region	12.4	22.1	27.8	25.1	13.8	100	66.8
Percent of total benefits nationally	4.2	5.8	7.4	6.7	3.7	26.5	
Percent of population within region	16.0	23.9	28.0	23.6	11.5	100	
Percent of population nationally	4.9	7.8	8.2	6.7	3.1	30.8	
Upper Urban							
Absolute benefits (LE)	7.6	8.0	9.5	9.8	8.6	8.7	
Percent of total benefits within region	16.5	15.3	20.0	22.7	25.5	100	68.2
Percent of total benefits nationally	1.9	1.8	2.3	2.6	2.9	11.5	
Percent of population within region	18.9	16.7	18.4	20.1	25.9	100	
Percent of population nationally	2.2	2.0	2.2	2.4	3.1	11.9	
Upper Rural							
Absolute benefits (LE)	7.3	9.3	10.5	12.6	14.7	9.4	
Percent of total benefits within region	32.3	24.6	18.4	15.7	8.9	100	43.1
Percent of total benefits nationally	8.5	6.5	4.9	4.2	2.4	26.4	
Percent of population within region	41.3	24.8	16.5	11.7	5.7	100	
Percent of population nationally	10.5	6.3	4.2	3.0	1.4	25.4	

Source: GASC, MOSS

Table 30: Per Capita Annual Sugar Subsidy Benefits Accruing to Expenditure Quintile Groups, by Region, and Benefits to Non needy,2008-09

	Expenditure Quintiles					Average	Top 3 Quintiles
	poorest Q	2nd Q	3rd Q	4the Q	richest Q		
All Egypt							
Absolute benefits (LE)	25.9	27.9	29.2	29.9	28.6	28.3	
Percent of total benefits	18.3	19.7	20.7	21.2	20.2	100	62.0
Percent of population	20	20	20	20	20	100	
Metropolitan							
Absolute benefits (LE)	15.7	17.6	19.0	21.8	24.1	21.8	
Percent of total benefits within region	4.1	7.0	11.9	23.7	53.3	100	88.9
Percent of total benefits nationally	0.5	0.9	1.6	3.1	7.0	13.1	
Percent of population within region	5.6	8.7	13.7	23.7	48.3	100	
Percent of population nationally	1.0	1.5	2.3	4.0	8.2	17.0	
Lower Urban							
Absolute benefits (LE)	23.9	26.0	27.0	27.8	27.6	27.1	
Percent of total benefits within region	6.3	13.5	20.2	28.3	31.8	100	80.2
Percent of total benefits nationally	0.7	1.5	2.2	3.1	3.5	11.0	
Percent of population within region	7.1	14.1	20.2	27.5	31.1	100	
Percent of population nationally	0.8	1.6	2.3	3.2	3.6	11.5	
Lower Rural							
Absolute benefits (LE)	26.8	28.8	32.0	35.6	39.3	32.3	
Percent of total benefits within region	10.8	21.4	27.8	26.1	14.0	100	67.8
Percent of total benefits nationally	3.9	7.7	10.1	9.4	5.1	36.2	
Percent of population within region	13.0	23.9	28.0	23.6	11.5	100	
Percent of population nationally	4.1	7.6	8.9	7.5	3.6	31.8	
Upper Urban							
Absolute benefits (LE)	23.7	26.0	26.4	26.1	25.5	25.5	
Percent of total benefits within region	20.1	18.9	17.1	19.9	23.9	100	61.0
Percent of total benefits nationally	2.1	2.0	1.8	2.1	2.5	10.3	
Percent of population within region	21.7	18.5	16.5	19.5	23.9	100	
Percent of population nationally	2.5	2.1	1.9	2.2	2.7	11.5	
Upper Rural							
Absolute benefits (LE)	27.0	30.2	32.2	34.2	40.5	30.0	
Percent of total benefits within region	38.6	26.3	17.2	11.2	6.7	100	35.1
Percent of total benefits nationally	10.9	7.4	4.9	3.2	1.9	28.3	
Percent of population within region	43.0	26.1	16.0	9.8	5.0	100	
Percent of population nationally	11.5	7.0	4.3	2.6	1.3	26.7	

Source: GASC, MOSS

Table 31: Per Capita Annual Cooking Oil Subsidy Benefits Accruing to Expenditure Quintile Groups, by Region, and Benefits to Non needy, 2004-05

	Expenditure Quintiles					Average	Top 3 Quintiles
	poorest Q	2nd Q	3rd Q	4the Q	richest Q		
All Egypt							
Absolute benefits (LE)	7.8	9.5	10.8	12.1	12.2	10.5	
Percent of total benefits	14.9	18.2	20.7	23.0	23.2	100	66.9
Percent of population	20	20	20	20	20	100	
Metropolitan							
Absolute benefits (LE)	7.1	9.4	9.9	11.2	10.8	10.4	
Percent of total benefits within region	3.6	8.8	13.6	25.0	49.1	100	87.7
Percent of total benefits nationally	0.7	1.6	2.5	4.7	9.1	18.6	
Percent of population within region	5.3	9.7	14.3	23.3	47.4	100	
Percent of population nationally	1.0	1.8	2.7	4.4	8.9	18.7	
Lower Urban							
Absolute benefits (LE)	8.4	9.1	9.9	10.7	12.3	10.5	
Percent of total benefits within region	7.8	14.5	20.2	27.8	29.8	100	77.8
Percent of total benefits nationally	0.9	1.8	2.4	3.4	3.6	12.1	
Percent of population within region	9.8	16.6	21.2	27.1	25.3	100	
Percent of population nationally	1.2	2.0	2.6	3.3	3.1	12.1	
Lower Rural							
Absolute benefits (LE)	8.1	131.7	142.0	151.8	172.1	142.9	
Percent of total benefits within region	11.6	22.1	27.8	25.1	13.8	100	66.8
Percent of total benefits nationally	3.8	5.8	7.4	6.7	3.7	26.5	
Percent of population within region	16.0	23.9	28.0	23.6	11.5	100	
Percent of population nationally	4.9	7.8	8.2	6.7	3.1	30.8	
Upper Urban							
Absolute benefits (LE)	8.3	9.0	10.9	11.2	10.9	10.1	
Percent of total benefits within region	15.5	14.8	19.7	22.2	27.8	100	69.7
Percent of total benefits nationally	1.8	1.7	2.3	2.6	3.2	11.5	
Percent of population within region	18.9	16.7	18.4	20.1	25.9	100	
Percent of population nationally	2.2	2.0	2.2	2.4	3.1	11.9	
Upper Rural							
Absolute benefits (LE)	7.5	9.8	11.0	13.8	16.4	9.9	
Percent of total benefits within region	31.3	24.7	18.4	16.3	9.4	100	44.1
Percent of total benefits nationally	7.5	5.9	4.4	3.9	2.3	24.0	
Percent of population within region	41.3	24.8	16.5	11.7	5.7	100	
Percent of population nationally	10.5	6.3	4.2	3.0	1.4	25.4	

Source: GASC, MOSS

Table 32: Per Capita Annual Cooking Oil Subsidy Benefits Accruing to Expenditure Quintile Groups, by Region, and Benefits to Non needy, 2008-09

	Expenditure Quintiles					Average	Top 3 Quintiles
	poorest Q	2nd Q	3rd Q	4the Q	richest Q		
All Egypt							
Absolute benefits (LE)	42.2	49.5	53.8	58.4	59.9	52.8	
Percent of total benefits	16.0	18.8	20.4	22.2	22.7	100	65.3
Percent of population	20	20	20	20	20	100	
Metropolitan							
Absolute benefits (LE)	37.1	41.0	43.9	51.4	56.7	51.2	
Percent of total benefits within region	4.1	6.9	11.7	23.8	53.4	100	89.0
Percent of total benefits nationally	0.7	1.1	1.9	3.9	8.8	16.5	
Percent of population within region	5.6	8.7	13.7	23.7	48.3	100	
Percent of population nationally	1.0	1.5	2.3	4.0	8.2	17.0	
Lower Urban							
Absolute benefits (LE)	46.2	49.0	51.4	53.7	56.9	53.0	
Percent of total benefits within region	6.2	13.0	19.6	27.8	33.4	100	80.8
Percent of total benefits nationally	0.7	1.5	2.3	3.2	3.9	11.6	
Percent of population within region	7.1	14.1	20.2	27.5	31.1	100	
Percent of population nationally	0.8	1.6	2.3	3.2	3.6	11.5	
Lower Rural							
Absolute benefits (LE)	51.0	55.2	60.3	69.9	78.4	62.2	
Percent of total benefits within region	10.6	21.2	27.1	26.6	14.5	100.0	68.2
Percent of total benefits nationally	4.0	8.0	10.2	10.0	5.4	37.5	
Percent of population within region	13.0	23.9	28.0	23.6	11.5	100	
Percent of population nationally	4.1	7.6	8.9	7.5	3.6	31.8	
Upper Urban							
Absolute benefits (LE)	38.0	41.7	44.3	45.3	46.7	43.2	
Percent of total benefits within region	19.0	17.8	16.9	20.4	25.8	100	63.2
Percent of total benefits nationally	1.8	1.7	1.6	1.9	2.4	9.4	
Percent of population within region	21.7	18.5	16.5	19.5	23.9	100	
Percent of population nationally	2.5	2.1	1.9	2.2	2.7	11.5	
Upper Rural							
Absolute benefits (LE)	39.8	47.2	51.8	56.3	73.1	46.9	
Percent of total benefits within region	36.5	26.3	17.7	11.8	7.8	100	37.3
Percent of total benefits nationally	8.7	6.2	4.2	2.8	1.9	23.7	
Percent of population within region	43.0	26.1	16.0	9.8	5.0	100	
Percent of population nationally	11.5	7.0	4.3	2.6	1.3	26.7	

Source: GASC, MOSS

Table 33: Per Capita Annual Rice Subsidy Benefits Accruing to Expenditure Quintile Groups, by Region, and Benefits to Non needy, 2004-05

	Expenditure Quintiles					Average	Top 3 Quintiles
	poorest Q	2nd Q	3rd Q	4the Q	richest Q		
All Egypt							
Absolute benefits (LE)	3.7	4.4	4.9	5.5	5.3	4.7	
Percent of total benefits	15.7	18.4	20.6	23.1	22.2	100	65.9
Percent of population	20	20	20	20	20	100	
Metropolitan							
Absolute benefits (LE)	3.2	3.7	4.0	4.4	4.3	4.2	
Percent of total benefits within region	4.0	8.7	13.6	24.8	48.9	100	87.3
Percent of total benefits nationally	0.7	1.4	2.2	4.1	8.0	16.4	
Percent of population within region	5.3	9.7	14.3	23.3	47.4	100	
Percent of population nationally	1.0	1.8	2.7	4.4	8.9	18.7	
Lower Urban							
Absolute benefits (LE)	3.9	4.3	4.6	5.0	5.4	4.8	
Percent of total benefits within region	8.0	14.7	20.3	28.4	28.6	100	77.3
Percent of total benefits nationally	1.0	1.8	2.5	3.5	3.5	12.3	
Percent of population within region	9.8	16.6	21.2	27.1	25.3	100	
Percent of population nationally	1.2	2.0	2.6	3.3	3.1	12.1	
Lower Rural							
Absolute benefits (LE)	4.0	131.7	142.0	151.8	172.1	142.9	
Percent of total benefits within region	12.1	22.1	27.8	25.1	13.8	100	66.8
Percent of total benefits nationally	4.2	5.8	7.4	6.7	3.7	26.5	
Percent of population within region	16.0	23.9	28.0	23.6	11.5	100	
Percent of population nationally	4.9	7.8	8.2	6.7	3.1	30.8	
Upper Urban							
Absolute benefits (LE)	3.6	4.0	4.9	5.2	4.5	4.4	
Percent of total benefits within region	15.2	15.0	20.1	23.3	26.4	100	69.8
Percent of total benefits nationally	1.7	1.7	2.2	2.6	2.9	11.1	
Percent of population within region	18.9	16.7	18.4	20.1	25.9	100	
Percent of population nationally	2.2	2.0	2.2	2.4	3.1	11.9	
Upper Rural							
Absolute benefits (LE)	3.6	4.5	5.1	6.2	7.6	4.6	
Percent of total benefits within region	32.4	24.1	18.3	15.9	9.4	100	43.5
Percent of total benefits nationally	8.0	5.9	4.5	3.9	2.3	24.6	
Percent of population within region	41.3	24.8	16.5	11.7	5.7	100	
Percent of population nationally	10.5	6.3	4.2	3.0	1.4	25.4	

Source: GASC, MOSS

Table 34: Per Capita Annual Rice Subsidy Benefits Accruing to Expenditure Quintile Groups, by Region, and Benefits to Non Needy, 2008-09

	Expenditure Quintiles					Average	Top 3 Quintiles
	poorest Q	2nd Q	3rd Q	4the Q	richest Q		
All Egypt							
Absolute benefits (LE)	17.4	20.1	20.9	21.5	22.1	20.4	
Percent of total benefits	17.1	19.7	20.5	21.1	21.7	100	63.3
Percent of population	20	20	20	20	20	100	
Metropolitan							
Absolute benefits (LE)	15.8	18.2	19.2	20.8	21.9	20.6	
Percent of total benefits within region	4.3	7.6	12.8	24.0	51.3	100	88.0
Percent of total benefits nationally	0.8	1.3	2.2	4.1	8.8	17.2	
Percent of population within region	5.6	8.7	13.7	23.7	48.3	100	
Percent of population nationally	1.0	1.5	2.3	4.0	8.2	17.0	
Lower Urban							
Absolute benefits (LE)	21.9	23.6	23.0	22.7	22.0	22.6	
Percent of total benefits within region	6.9	14.7	20.6	27.6	30.3	100	78.4
Percent of total benefits nationally	0.9	1.9	2.6	3.5	3.9	12.8	
Percent of population within region	7.1	14.1	20.2	27.5	31.1	100	
Percent of population nationally	0.8	1.6	2.3	3.2	3.6	11.5	
Lower Rural							
Absolute benefits (LE)	19.1	19.7	20.7	21.9	23.3	20.8	
Percent of total benefits within region	11.9	22.6	27.8	24.9	12.8	100	65.5
Percent of total benefits nationally	3.9	7.3	9.0	8.1	4.2	32.4	
Percent of population within region	13.0	23.9	28.0	23.6	11.5	100	
Percent of population nationally	4.1	7.6	8.9	7.5	3.6	31.8	
Upper Urban							
Absolute benefits (LE)	15.0	17.7	18.9	18.5	19.2	17.8	
Percent of total benefits within region	18.3	18.3	17.5	20.2	25.7	100	63.4
Percent of total benefits nationally	1.8	1.8	1.8	2.0	2.6	10.0	
Percent of population within region	21.7	18.5	16.5	19.5	23.9	100	
Percent of population nationally	2.5	2.1	1.9	2.2	2.7	11.5	
Upper Rural							
Absolute benefits (LE)	17.0	20.5	22.0	23.6	28.8	19.9	
Percent of total benefits within region	36.6	26.8	17.7	11.6	7.2	100	36.5
Percent of total benefits nationally	9.5	7.0	4.6	3.0	1.9	26.0	
Percent of population within region	43.0	26.1	16.0	9.8	5.0	100	
Percent of population nationally	11.5	7.0	4.3	2.6	1.3	26.7	

Source: GASC, MOSS

Table 35: Annual Nominal Per Capita Consumer Subsidy Benefits, and Share in Total Expenditure; by Subsidized Commodities, Region and Expenditure Quintile 2004/05 and 2008/09

	Quintiles of per capita expenditure, 2008-09						Quintiles of per capita expenditure, 2004-05					
	1	2	3	4	5	Average	1	2	3	4	5	Average
	All Egypt											
Subsidies for baladi bread	123	134.9	146.9	164.4	167.8	147.4	59	60.4	64	72.6	77.5	66.7
baladi Wheat flour	45	29.8	19.2	13.6	7.7	23.1	7.8	9.5	10.8	12	12.1	10.5
Cooking Oil	42.2	49.5	53.8	58.4	59.9	52.7	7.3	8.5	9.4	10.2	9.6	9
Sugar	25.9	27.9	29.2	29.9	28.6	28.3	1.6	2.4	3.3	3.3	2.4	2.6
Rice	17.4	20.1	20.9	21.5	22.1	20.4	3.7	4.4	4.9	5.5	5.3	4.7
All subsidies	257.9	266.6	274.3	292.9	290.5	276.4	87.6	94.3	102.4	114.4	115.8	102.9
Per capita consumption	1714	2423.6	3032.5	3887	7503.7	3712.1	1141.8	1613.3	2037.3	2632.5	5216.6	2531
Total subsidies as % total consumption	15	11	9	7.5	3.9	7.4	7.7	5.8	5	4.3	2.2	4.1
	Metropolitan											
Subsidies for baladi bread	176.6	186.2	186.2	189.5	167	177.2	85	93.5	93.3	91	78.4	85.3
baladi Wheat flour	0	0.1	0.2	0.3	0.4	0.3	7.1	9.4	9.9	11.2	10.8	10.4
Cooking Oil	37.1	41	43.9	51.4	56.7	51.2	5.8	6.9	7.6	8.2	7.9	7.7
Sugar	15.7	17.6	19	21.8	24.1	21.8	1.2	1.7	6.1	1.6	1.5	2.2
Rice	15.8	18.1	19.2	20.8	21.9	20.6	3.2	3.7	4	4.4	4.3	4.2
All subsidies	248.7	267.1	272.1	287.6	273.3	274.6	108.1	121.6	127.9	123.8	109.4	116.5
Per capita consumption	1787.2	2441.5	3055	3930.8	8633.3	5831.7	1220.4	1646.2	2066.4	2687.3	6002.7	3985.5
Total subsidies as % total consumption	13.9	10.9	8.9	7.3	3.2	4.7	8.9	7.4	6.2	4.6	1.8	2.9
	Lower Urban											
Subsidies for baladi bread	150.9	180.7	192.6	197.6	186.4	187.4	79.1	78.5	80.9	84.9	86.6	82.9
baladi Wheat flour	1	0.2	0.3	0.3	0.1	0.3	8.4	9.1	9.9	10.7	12.3	10.5
Cooking Oil	46.2	49	51.4	53.7	56.9	53	7.1	7.8	8.3	8.9	9.8	8.7
Sugar	23.9	26	27	27.8	27.6	27	1.6	1.7	1.8	6.3	2.1	3.1
Rice	21.9	23.6	23	22.7	22	22.6	3.9	4.3	4.6	5	5.4	4.8
All subsidies	248.1	283.7	298.1	305.2	299.6	294.9	107.5	109.1	114.1	125.2	126.2	118.7
Per capita consumption	1857.2	2449.7	3036.7	3911.4	6944	4326.8	1212.3	1629.9	2054.3	2648.3	4697.9	2732
Total subsidies as % total consumption	13.4	11.6	9.8	7.8	4.3	6.8	8.9	6.7	5.6	4.7	2.7	4.3

Tabel 35: Per Capita Annual Consumer Subsidy Benfits…/Continued

	Lower Rural											
Subsidies for baladi bread	106.1	113.3	122.1	130.6	148.1	122.9	38.6	41.1	44.8	50.1	62.9	45.9
baladi Wheat flour	0.7	0.9	0.8	0.7	0.4	0.8	8.1	9.6	11.3	12.9	15.7	11.2
Cooking Oil	51	55.2	60.3	69.9	78.4	62.2	7.6	8.6	9.9	11.3	13.1	9.8
Sugar	26.8	28.8	32	35.6	39.3	32.3	1.7	3.3	3.6	3.1	5.3	3.3
Rice	19.1	19.7	20.7	21.9	23.3	20.8	4	4.6	5.2	6.2	7.7	5.3
Tea	4.8	4.4	4.4	4.6	4.7	4.5	8.4	9.7	11	13	14.1	11
All subsidies	208.5	222.3	240.4	263.2	294.2	243.5	68.4	76.8	85.8	96.6	118.7	86.5
Per capita consumption	1845.1	2439.7	3035.2	3858.4	6020.2	3275.4	1198.5	1612.8	2025.5	2605.5	3988.7	2120.7
Total subsidies as % total consumption	11.3	9.1	7.9	6.8	4.9	7.4	5.7	4.8	4.2	3.7	3	4.1
	Upper Urban											
Subsidies for baladi bread	167.6	172.7	184.7	194	168.1	176.6	87.4	87.2	93.3	94.9	80.5	88.2
baladi Wheat flour	53.3	50.1	39.2	30.8	15.4	36.9	8.3	9	10.9	11.2	10.9	10.1
Cooking Oil	38	41.7	44.3	45.3	46.7	43.2	7.6	8	9.5	9.8	8.6	8.7
Sugar	23.7	26	26.4	26.1	25.4	25.4	1.8	1.8	2.2	2.3	1.8	2
Rice	15	17.7	18.9	18.5	19.2	17.8	3.6	4	4.8	5.2	4.5	4.4
All subsidies	301.3	312.2	317.5	318.1	278.2	303.7	116.4	118	130.4	133.2	114	122
Per capita consumption	1683.1	2413.4	3032.3	3912.3	7562.4	3879.3	1109.3	1627.3	2055.7	2667.3	5442.7	2803.7
Total subsidies as % total consumption	17.9	12.9	10.5	8.1	3.7	7.8	10.5	7.3	6.3	5	2.1	4.4
	Upper Rural											
Subsidies for baladi bread	113.6	126.3	135.9	153.4	171.6	127.3	58.8	60.9	57.4	64.3	77	60.8
baladi Wheat flour	65.5	67.4	68.8	73	76.1	67.8	7.5	9.8	11	13.8	16.3	9.9
Cooking Oil	39.8	47.2	51.8	56.3	73.1	46.9	7.3	9.3	10.5	12.6	14.7	9.4
Sugar	27	30.2	32.2	34.2	40.5	30	1.6	2.1	2.4	4.1	3.2	2.2
Rice	17	20.5	22	23.6	28.8	19.9	3.6	4.5	5.1	6.2	7.6	4.6
All subsidies	267.5	296.3	315.2	351.4	395.4	297.3	87.1	96.4	97.6	114.6	134.2	97
Per capita consumption	1657.3	2399.1	3010	3841.2	6036.4	2501.5	1108.2	1595.3	2022.8	2600.1	4007.7	1719.1
Total subsidies as % total consumption	16.1	12.4	10.5	9.1	6.5	11.9	7.9	6	4.8	4.4	3.3	5.6

Source: Calculated by the authors, using CAPMAS' HIECS 2004/05 and 2008/09 data.

Tabel 36: Per capita annual Absolute Benfits to Consumers from Sub BB

	Nominal						REAL					
	poorest Q	2nd Q	3rd Q	4th Q	Richest Q	Total	poorest Q	2nd Q	3rd Q	4th Q	Richest Q	Total
	Baladi Bread											
Metropolitan	177	186	186	189	167	**177**	121	128	128	130	115	**122**
Lower Urban	151	181	193	198	186	**187**	103	123	131	135	127	**128**
Lower Rural	106	113	122	131	148	**123**	70	75	81	86	98	**81**
Upper Urban	168	173	185	194	168	**177**	114	118	126	132	115	**120**
Upper Rural	114	126	136	153	172	**127**	76	85	91	103	115	**85**
Borders Urban	118	158	184	206	189	**187**	81	109	127	142	131	**129**
Borders Rural	48	61	83	152	122	**91**	33	42	57	105	84	**63**
Total	**123**	**135**	**147**	**164**	**168**	**147**	**84**	**92**	**100**	**112**	**114**	**100**
	Wheat Flour											
Metropolitan	0	0	0	0	0	**0**	0	0	0	0	0	**0**
Lower Urban	1	0	0	0	0	**0**	1	0	0	0	0	**0**
Lower Rural	1	1	1	1	0	**1**	0	1	1	0	0	**0**
Upper Urban	53	50	39	31	15	**37**	36	34	27	21	10	**25**
Upper Rural	65	67	69	73	76	**68**	44	45	46	49	51	**45**
Borders Urban	28	31	10	7	7	**11**	19	22	7	5	5	**7**
Borders Rural	104	83	43	28	51	**61**	72	57	29	20	35	**42**
Total	**45**	**30**	**19**	**14**	**8**	**23**	**31**	**20**	**13**	**9**	**5**	**16**
	Baladi Bread and Wheat flour											
Metropolitan	177	186	186	190	167	**178**	121	128	128	130	115	**122**
Lower Urban	152	181	193	198	186	**188**	104	123	132	135	127	**128**
Lower Rural	107	114	123	131	148	**124**	71	76	81	87	98	**82**
Upper Urban	221	223	224	225	183	**214**	150	152	152	153	125	**145**
Upper Rural	179	194	205	226	248	**195**	120	130	137	152	166	**131**
Borders Urban	146	189	194	212	196	**198**	101	131	134	147	135	**137**
Borders Rural	152	144	125	181	172	**152**	105	99	87	125	119	**105**
Total	**168**	**165**	**166**	**178**	**176**	**170**	**114**	**112**	**113**	**121**	**119**	**116**

Source: GASC, MOSS

Table 36: Leakage in the baladi bread subsidy system, 2008/09 and 2004/05

grams/person/day

	Baladi Bread 2008/09			Baladi Bread 2004/05		
	Supply	Consumption	Leakage	Supply	Consumption	Leakage
Metropolitan	352.5	247.2	42.6%	346.2	222.4	55.7%
Lower Egypt	247.8	195.4	26.8%	212.1	146.9	44.4%
Upper Egypt	251.0	198.3	26.6%	230.6	181.2	27.3%
Frontiers	286.6	214.8	33.4%	265.3	161.6	64.2%
All Egypt	**269.3**	**205.6**	**31%**	**245.0**	**173.9**	**40.8%**
	Baladi Bread 2008/09			**Baladi Bread and Wheat Flour 2008/09**		
	Supply	Consumption	Leakage	supply	Consumption	Leakage
Metropolitan	2.8	0.3	988.5%	355.4	247.4	43.6%
Lower Egypt	4.4	0.7	518.8%	252.2	196.1	28.6%
Upper Egypt	71.9	66.8	7.7%	322.9	265.0	21.8%
Frontiers	113.8	80.3	41.7%	400.4	295.1	35.7%
All Egypt	**30.7**	**27.0**	**13%**	**300.0**	**232.6**	**28.9%**

Source: GASC, MOSS

Table 37: Leakage in the Subsidized sugar subsidy system, 2008/09 and 2004/05

Kg/Person/Year

	Sugar 2008/09			Sugar 2004/05		
	Subsidized sugar supplied	Subsidized Sugar purchased by survey households	Leakage	Subsidized sugar supplied	Subsidized Sugar purchased by survey households	Leakage
Metropolitan	13.7	10.1	26.0%	6.6	4.7	29.3%
Lower Egypt	18.1	14.4	20.6%	6.7	5.8	14.3%
Upper Egypt	16.1	13.3	17.3%	6.8	5.6	18.6%
Frontiers	13.1	9.4	28.1%	4.8	4.0	16.6%
All Egypt	**16.5**	**13.2**	**20.0%**	**6.7**	**5.5**	**18.7%**

Source: GASC, MOSS

Table 38: Leakage in the Subsidized Cooking Oil Subsidy System, 2008/09 and 2004/05

Kg/Person/Year

	Oil 2008/09			Oil 2004/05		
	Subsidized oil supplied	Subsidized oil purchased by survey households	Leakage (percent)	Subsidized oil supplied	Subsidized oil purchased by survey households	Leakage (percent)
Metropolitan	9.71	7.35	26.0%	5.94	3.79	29.3%
Lower Egypt	11.32	8.14	20.6%	5.22	3.99	14.3%
Upper Egypt	10.25	6.26	17.3%	4.84	3.63	18.6%
Frontiers	8.10	6.12	28.1%	4.05	3.15	16.6%
All Egypt	**10.57**	**7.26**	**20.0%**	**5.20**	**3.81**	**18.7%**

Source: GASC, MOSS

Table 39: Leakage in the Subsidized Rice Subsidy System, 2008/09 and 2004/05

Kg/Person/Year

	Rice 2008/09			Rice 2004/05		
	Subsidized rice supplied	Subsidized rice purchased by survey households	Leakage (percent)	Subsidized rice supplied	Subsidized rice purchased by survey households	Leakage (percent)
Metropolitan	11.93	10.29	26.0%	5.24	4.16	29.3%
Lower Egypt	14.08	13.62	20.6%	5.60	5.18	14.3%
Upper Egypt	12.03	9.38	17.3%	5.14	4.55	18.6%
Frontiers	9.56	10.46	28.1%	3.71	3.61	16.6%
All Egypt	**12.85**	**11.39**	**20.0%**	**5.33**	**4.73**	**18.7%**

Table 40 : Due Compensation if Food Subsidies are Eliminated, by Commodity and Region

		Bread	Ration cards	All food Subsidies
All Egypt	**compensation per person per month, LE**	10.74	8	21.85
	% Drop in Consumption	6.23	4.6	12.68
Metropolitan	**compensation per person per month, LE**	15.12	6.4	21.49
	% Drop in Consumption	8.58	3.6	12.2
Lower Urban	**compensation per person per month, LE**	13.81	8.3	22.16
	% Drop in Consumption	7.7	4.6	12.35
Lower Rural	**compensation per person per month, LE**	9.14	8.7	17.95
	% Drop in Consumption	5.12	4.9	10.05
Upper Urban	**compensation per person per month, LE**	14.18	7.1	25.56
	% Drop in Consumption	8.31	4.1	14.98
Upper Rural	**compensation per person per month, LE**	9.99	8	23.49
	% Drop in Consumption	5.91	4.7	13.9

Table 41 : Cost effectiveness of subsidiesed food items

a) 2008/2009

	bread	wheat flour	bread and wheat flour	Sugar	Oil	Rice	RC	Bread and RC	All
Unit costs of subsidy (LE/metric ton)	1971	1896	1963	1725	4428	577	2244	2064	2053
System leakage (%)	31.0	13.4	29.2	20.0	31.4	11.4	25.7	29.2	28.1
Income transfer to all consumers (LE/metric ton)	*1360.5*	*1641.7*	*1389.2*	*1380.5*	*3039.6*	*511.5*	*1668.0*	*1462.4*	*1476.1*
Cost/income transfer to all consumers (LE)	1.45	1.15	1.41	1.25	1.46	1.13	1.35	1.41	1.39
Benefits to the richest 40 percent (%)	45.1	18.5	41.5	41.4	44.9	42.8	43.0	43.5	43.1
Income transfer to poorest 60 percent (LE/metric ton)	*747.1*	*1337.7*	*812.8*	*809.4*	*1676.3*	*292.8*	*950.8*	*825.7*	*839.9*
Benefits to the richest 60 percent (%)	65.0	35.2	61.0	62.0	65.3	63.3	63.5	64.0	63.6
Income transfer to poorest 40 percent (LE/metric ton)	*261.4*	*867.4*	*317.2*	*307.4*	*582.4*	*107.6*	*347.0*	*297.2*	*305.8*

b) 2004/05

	bread	wheat flour	bread and wheat flour	Sugar	Oil	Rice	RC	Bread and RC
Unit costs of subsidy (LE/metric ton)	1061	985	1051	1347	2706	1129	1727	1240
System leakage (%)	40.8	NA	NA	18.7	26.7	11.3	21.3	29.9
Income transfer to all consumers (LE/metric ton)	*627.5*			*1095.3*	*1983.3*	*1001.6*	*1360.1*	*868.5*
Cost/income transfer to all consumers (LE)	1.69			1.23	1.36	1.13	1.27	1.43
Benefits to the richest 40 percent (%)	45.0			43.9	46.2	45.3	45.1	45.6
Income transfer to poorest 60 percent (LE/metric ton)	*282.3*			*480.4*	*916.6*	*453.9*	*746.2*	*472.9*
Benefits to the richest 60 percent (%)	64.2			64.8	66.9	65.9	65.9	66.2
Income transfer to poorest 40 percent (LE/metric ton)	*101.1*			*169.3*	*303.4*	*154.7*	*254.8*	*159.7*