



REFORMS OF PUBLIC FINANCE IN EGYPT: ENERGY AND FOOD SUBSIDIES

Price Subsidies in Egypt: Alternatives for Reform

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October 5th, 2010

Four Dimensions

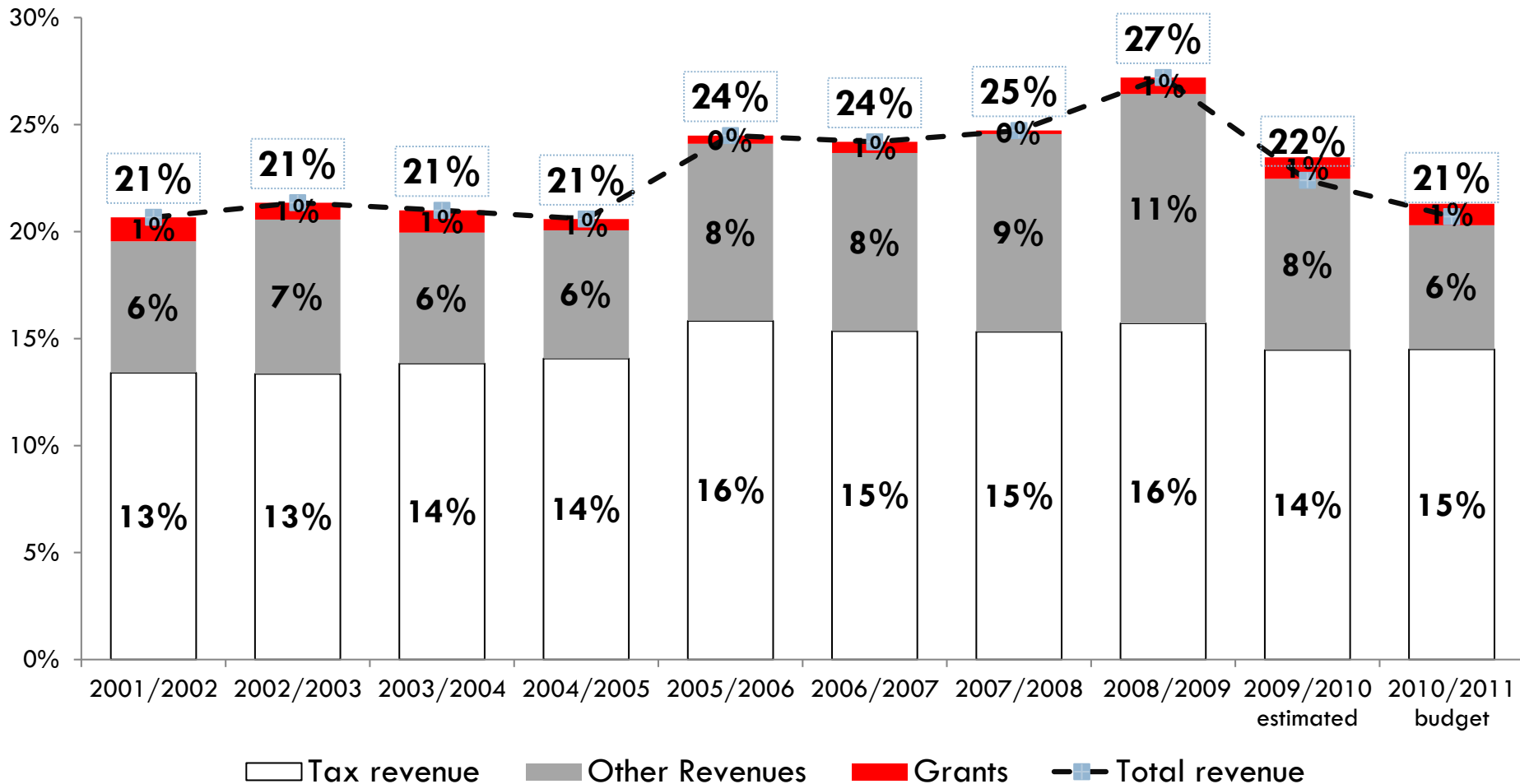
- Subsidies and the state of public finance.
- Subsidies and social equity.
- Alternatives to reduce waste of government resources and achieve better equity.
- Importance of reforms to fiscal space, sustainability and growth.

Presentation Outline

- The state of public finance in Egypt: *Emphasis on subsidies.*
- Petroleum subsidies.
- Food subsidies.
- Concluding remarks.

Efforts to mobilize additional revenues have paid off. Yet, there is still room for further improvement

Total revenues as percent of GDP



Major reforms of the tax system

5

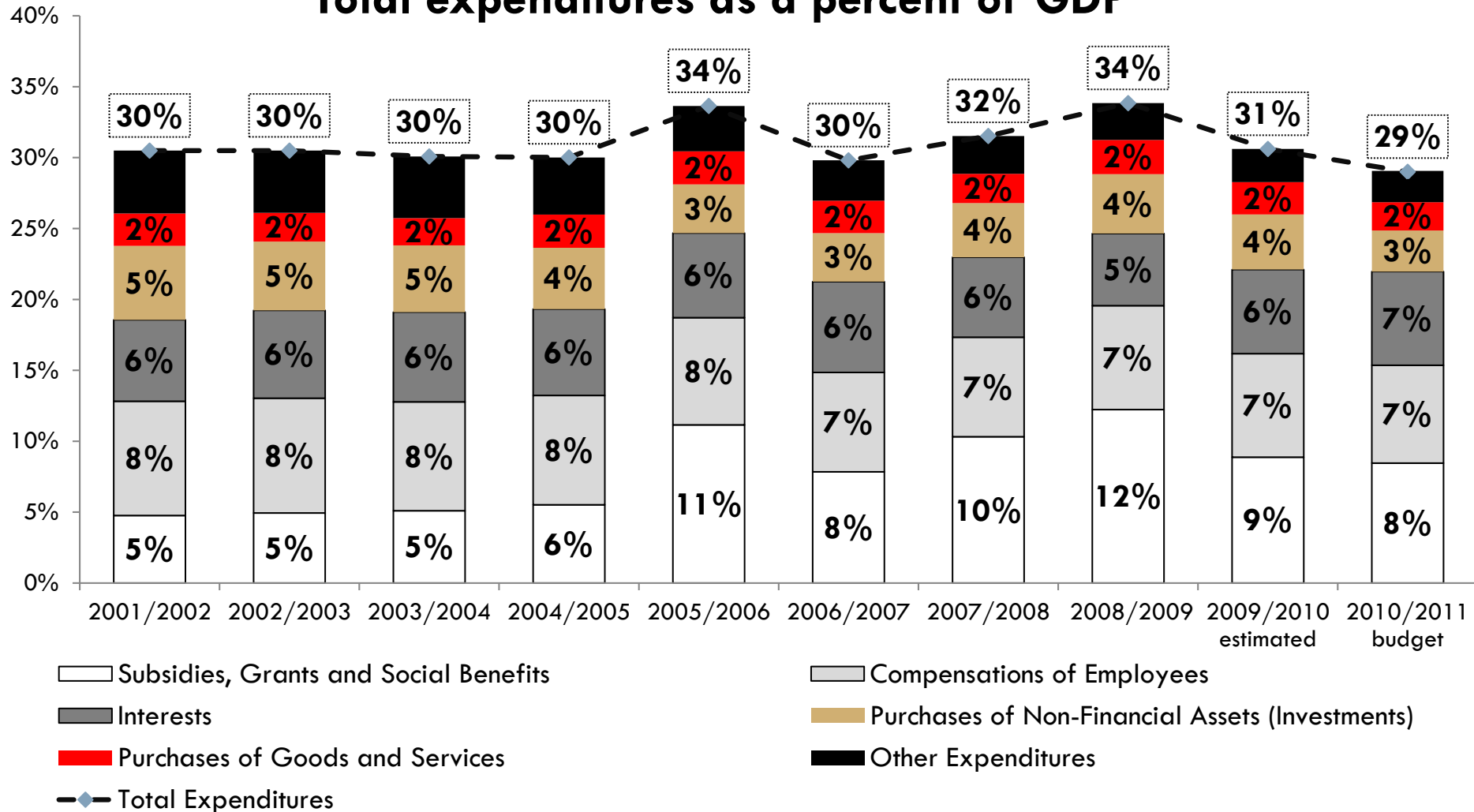
- **In 2005**, the introduction of a new income tax law (law no 91 for 2005), replacing law no 157 for 1981.
 - The new law introduced a number of changes:
 - The corporate income tax rate ranging 32% - 40% was replaced by a uniform 20% tax rate. (with the exception of the oil and gas sector, where the 40.55% rate continues to apply).
 - All sector, location and business specific holidays and exemptions were eliminated,
 - and electronic payment methods were introduced.
- The result was a doubling of the number of filed tax returns between 2004 and 2005.

Major reforms of the tax system (Cont'd)

- **In 2006**, the property tax rate was reduced from 47% to 10%, and its scope was expanded. These moves were designed to raise disposable income for consumption and investment while simultaneously broadening the tax base.
- **In 2008/09**, measures to increase tax compliance, the increase in the sales tax on cigarettes and the abolition of some tax exemptions boosted revenues.
- **In 2008**, the introduction of the real estate tax (law no 196 for 2008).
- **In 2009/10**, a new property tax of 10% (which has been postponed to January 2010 from January 2009) should also help lift tax receipts.

On the heels of the efforts to contain current spending, expenditures have increased more recently

Total expenditures as a percent of GDP



Major determinants of the increase in spending

8

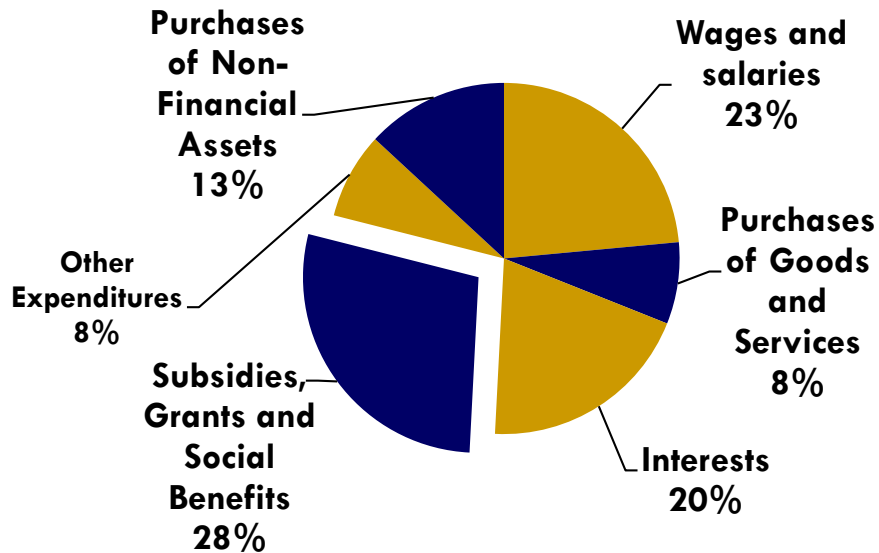
- **In 2005/06**, total expenditures increased, mainly driven by the rise in wages and compensation of government employees* (by 12.5%) following election promises to increase salaries; in addition to the increase in subsidies, grants and social benefits (by 131.9%).
- **In 2007/08**, rising food and energy prices pushed up government expenditures with expenditure on subsidy reaching 10% of GDP.
- **In 2008/09**, large increases in compensation of government employees raised expenditures. Moreover, the government introduced an additional LE billion 14.4 fiscal stimulus package to boost economic growth, which further increased expenditures.

**This covers employees of Central Administration and Local Governments, and Public Services Authorities.*

Developments in expenditure composition over time

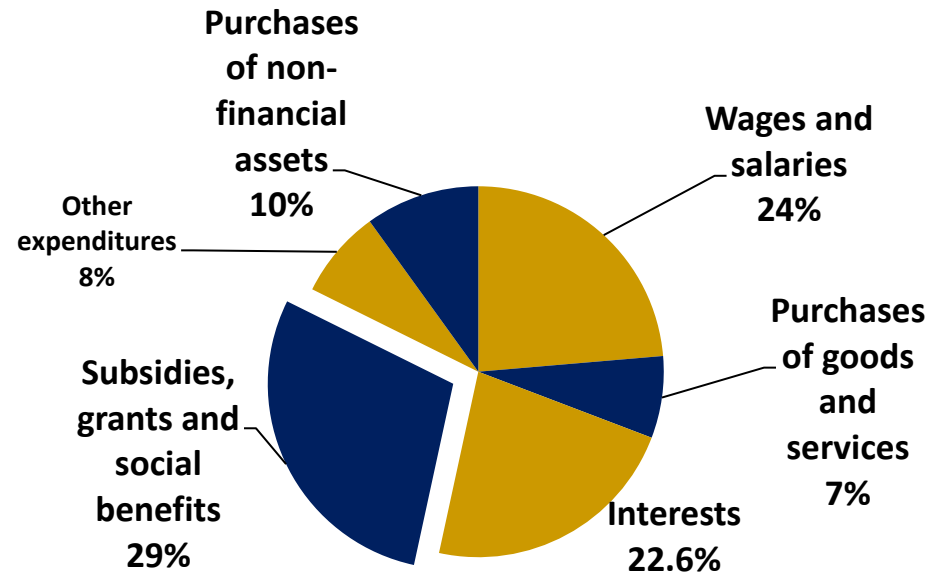
Subsidies are expected to grow and remain the largest share of expenditures in 2010/11, in addition to notable increases in expenditures on wages and salaries and the cost of servicing existing debt, i.e. interest payments.

The breakdown of expenditures in 2009/2010*



* Estimated.

The breakdown of expenditures in 2010/2011**

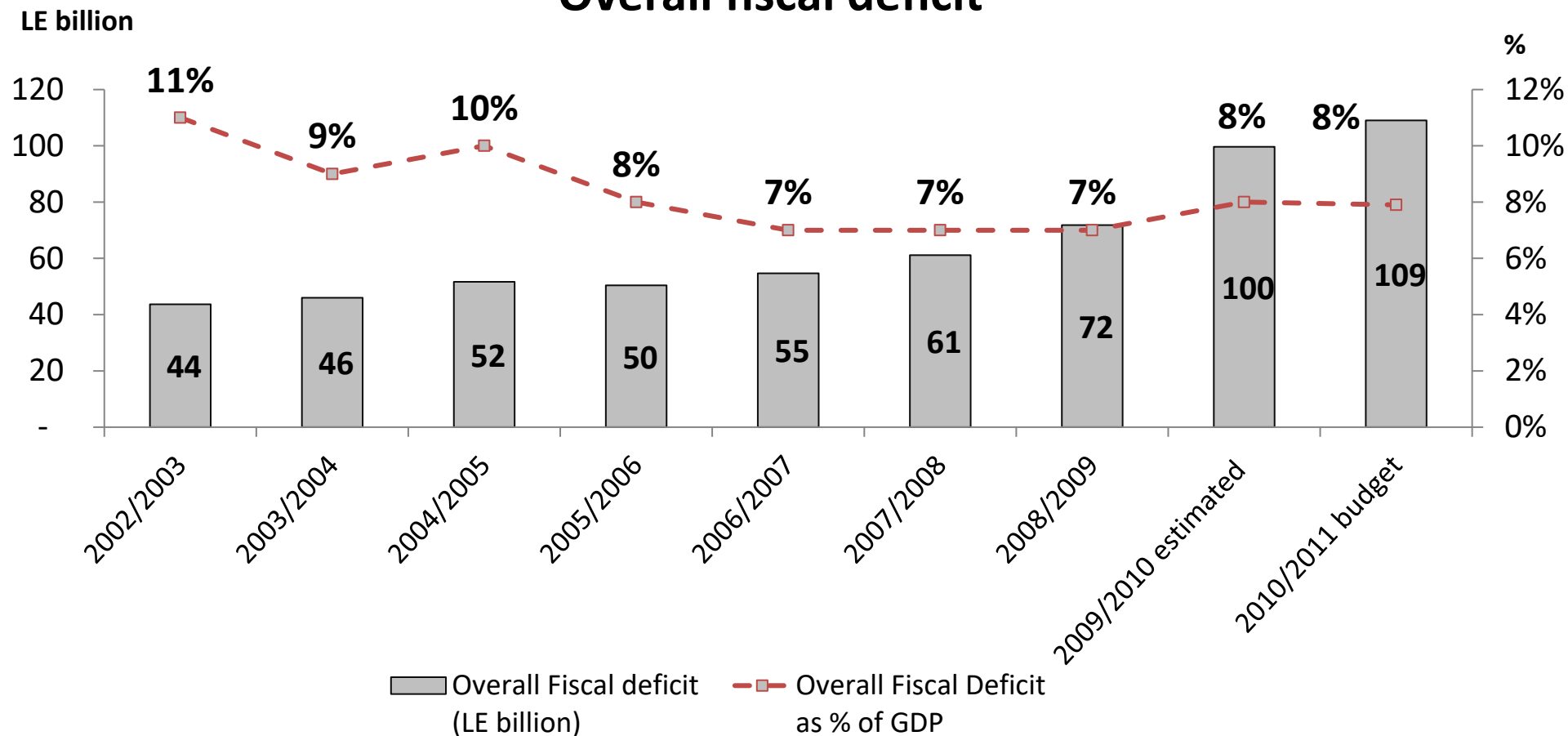


** Budget.

On the heels of successful consolidation efforts, the deficit has surged more recently

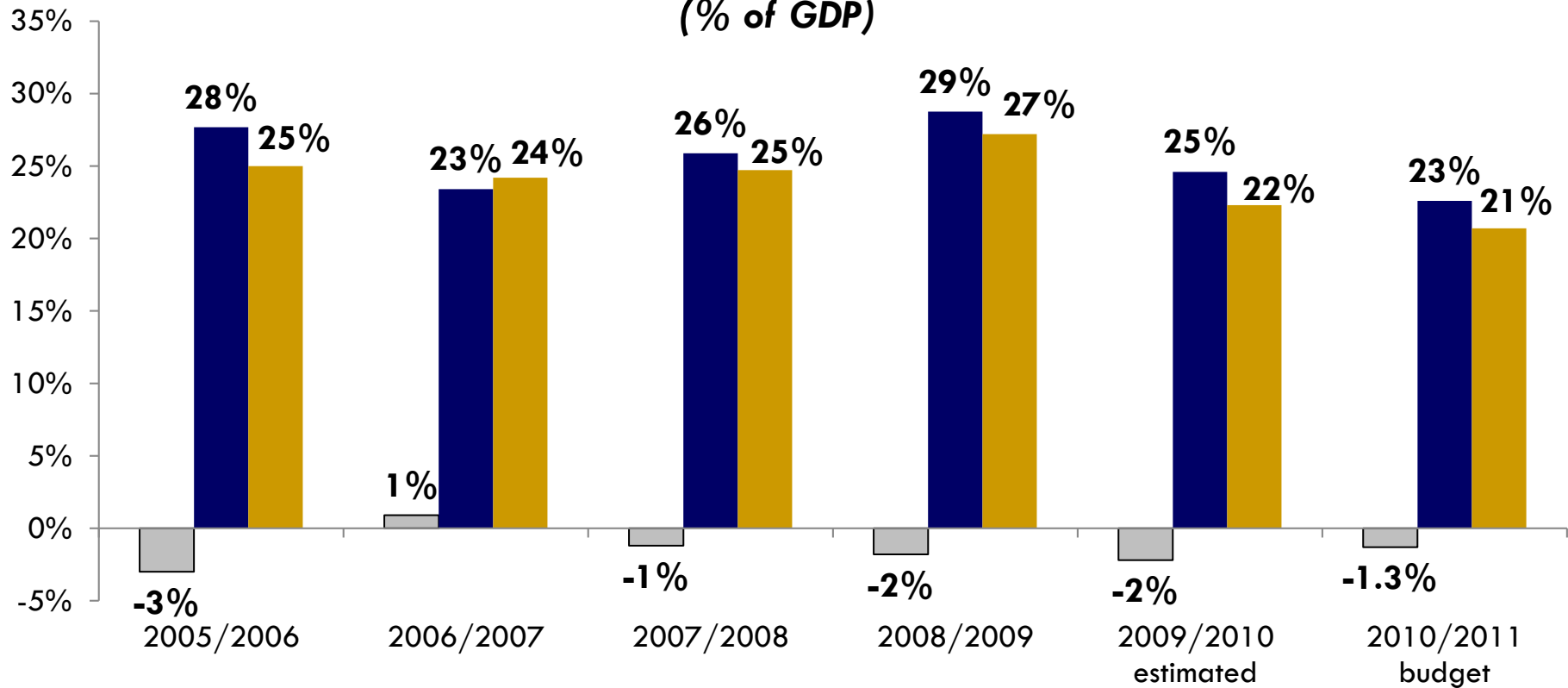
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Overall fiscal deficit



The increase in primary expenditures surpassed that of revenues, widening the primary deficit recently

Primary deficit, primary expenditures and total revenues
(% of GDP)

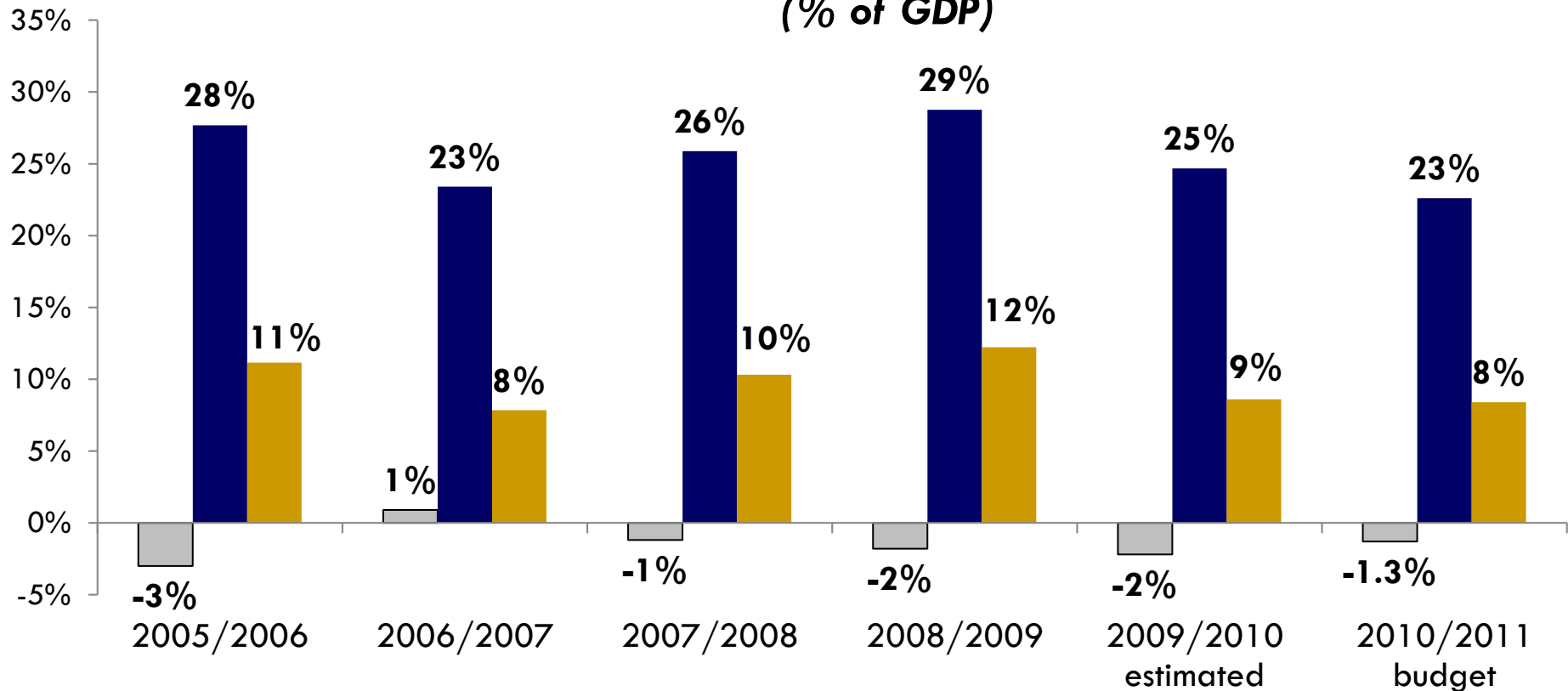


■ Primary deficit as % of GDP ■ Primary expenditures as % of GDP ■ Total revenues as % of GDP

Underlying the increase in primary expenditures has been a recent surge in subsidies and grants

12

Primary deficit, primary expenditures and subsidies (% of GDP)

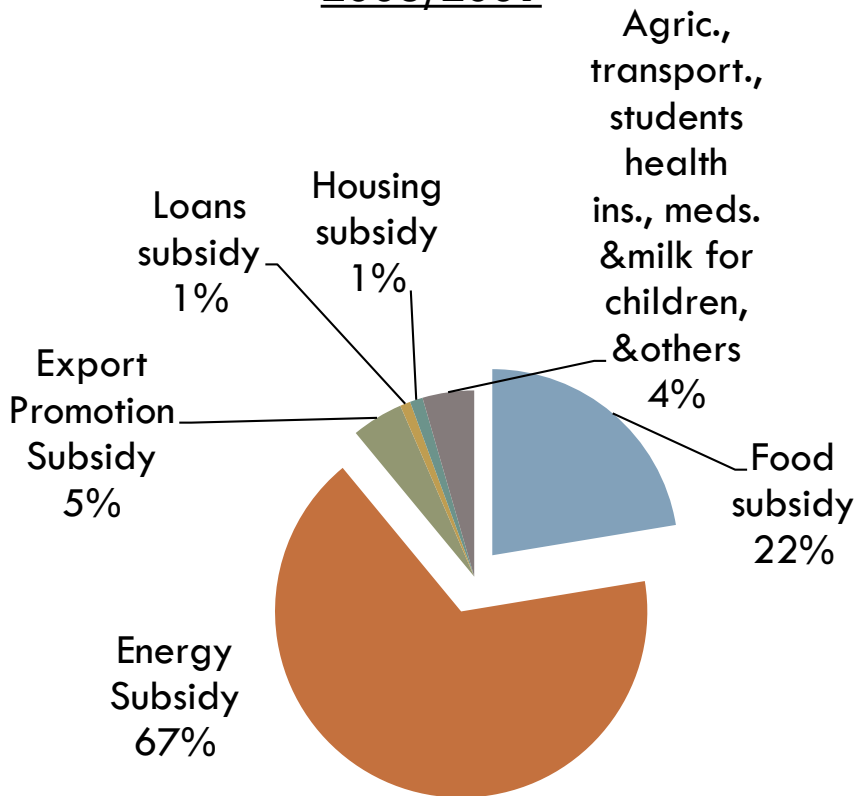


■ Primary deficit as % of GDP ■ Primary expenditures as % of GDP ■ Subsidies, grants and social benefits as % of GDP

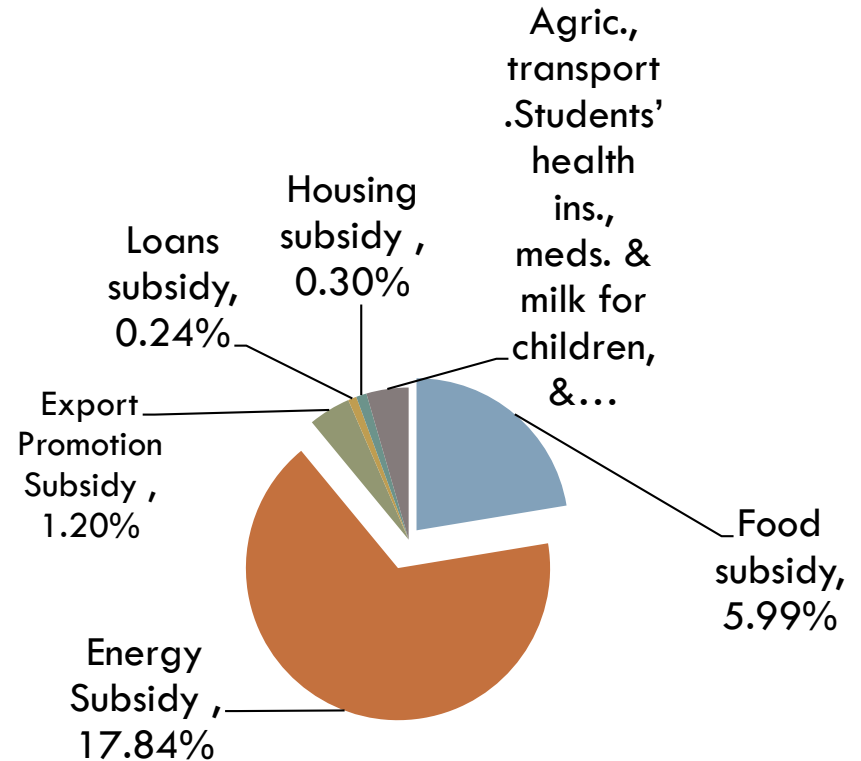
Breakdown of subsidies by category

More than two thirds of total subsidies are for fuel products while food subsidy is less than one quarter

The classification of the subsidies in 2008/2009



Subsidies as a percent of total expenditures in 2008/2009



The increase in subsidies: determinants and implications

14

- In order to decrease the fiscal deficit, the government has been trying to restructure the subsidies scheme.
- However, during the course of reform, emerging global turbulences occurred, specifically:
 - the notable hike in world food and energy prices (2007-2008)
 - followed by the global financial turmoil (late 2008 to present)
- This increasingly challenged the ability of economic policy to commit to subsidy reform.

Petroleum Subsidy*

*This part of the presentation draws on Abouleinein, El-Laithy and Kheir-El-Din (2009), ECES Working Paper No. 145

The Impact of Phasing Out Petroleum Subsidies in Egypt

16

Subsidization of Petroleum Products in Egypt: Main Issues

- What is the size of petroleum subsidies?
- What is the expected impact of phasing out petroleum subsidies?
- Who benefits from these subsidies?
- What can we learn from international experiences?

What is the size of petroleum subsidies?

17

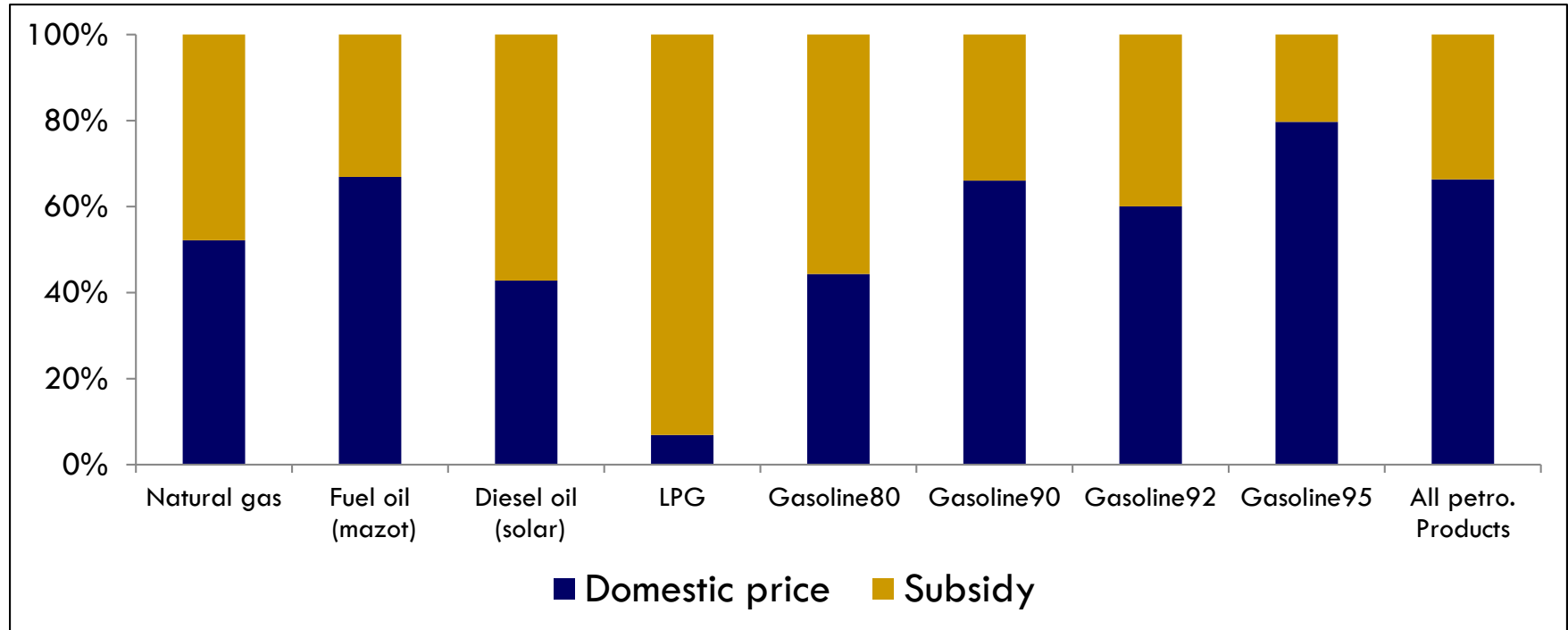
Costs, prices and subsidies of petroleum products (2008/09)

Unit	Petroleum Products	Domestic price (in LE)	Actual Cost (in LE)	Subsidy per unit (calculated as actual cost minus domestic price) (in LE)	Share of subsidy to cost
M3	Natural gas (for electricity)	0.24	0.46	0.22	48%
Ton	Fuel oil (mazot)	1000	1495	495	33%
Liter	Diesel oil (solar)	1.1	2.57	1.47	57%
Cylinder	LPG	2.5	36.16	33.66	93%
Liter	Gasoline80	0.9	2.03	1.13	56%
	Gasoline90	1.75	2.65	0.9	34%
	Gasoline92	1.85	3.08	1.23	40%
	Gasoline95	2.75	3.45	0.7	20%
	Weighted Average of all petroleum products	240.6	122.10	118.5	32.67%

What is the size of petroleum subsidies?

18

Ratios of domestic prices and subsidies to actual costs of petroleum products in 2008/09

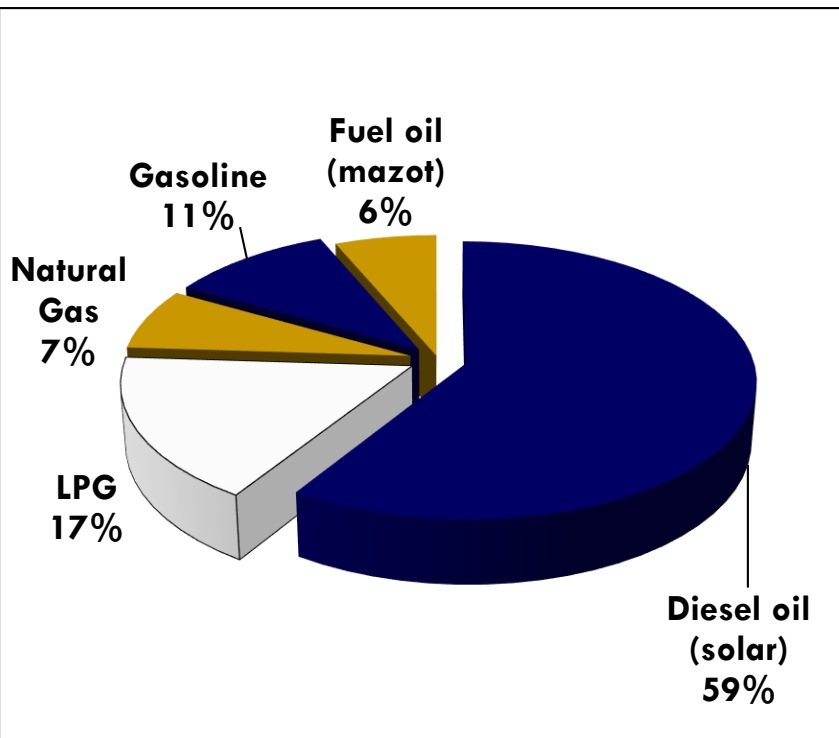


Note: In the last column (all petroleum products), the subsidy, and the domestic price, are each calculated as a weighted average. Weights are taken as each product's share in total consumption of petroleum products.

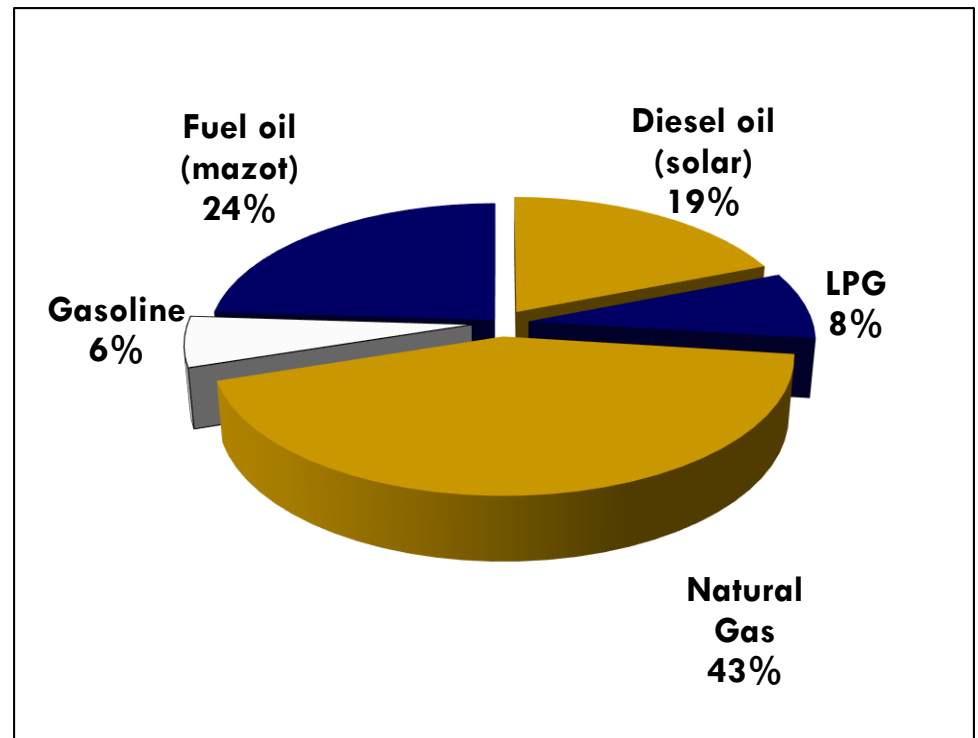
What is the size of petroleum subsidies?

19

The structure of subsidies of petroleum products (2008/09)



The structure of consumption of petroleum products (2006/07)



Source: Final Accounts, Plan and Budget Committee, People's Assembly for fiscal year 2008/2009

Source: Abouleinein, El-Laithy and Kheir-El-Din (2009) from the updated i/o tables 06/07.

What is the size of petroleum subsidies?

20

Petroleum subsidy: various indicators

	2006/2007	2007/2008	2008/2009	2009/2010 (Estimated)	2010/2011 (Budget)
Petroleum Subsidy (in billion LE)	40.13	60.25	62.7	66.5	67.68
Share in total subsidies (%)	74.37	71.55	66.83	70.32	66.83
Share in total expenditures (%)	18.07	21.34	17.84	18.11	16.79
Share in total revenues (%)	22.27	27.21	22.20	24.75	23.68
Share of GDP (%)	5.39	6.73	6.04	5.55	4.91

What is the impact of phasing out petroleum subsidies on consumer prices?

21

- Estimation of the direct and indirect impacts of phasing out subsidies of various petroleum products was done using input/output tables for 2006/2007 data (23 sectors consolidated into 7).
- Estimation of these impacts depends on:
 - The increase in the price of each petroleum product.
 - The weight of each product in the total cost structure of the various sectors.
 - The weight of each product in the households' final consumption.
 - The pattern of linkages among the various sectors.

What is the impact of phasing out petroleum subsidies on consumer prices?

22

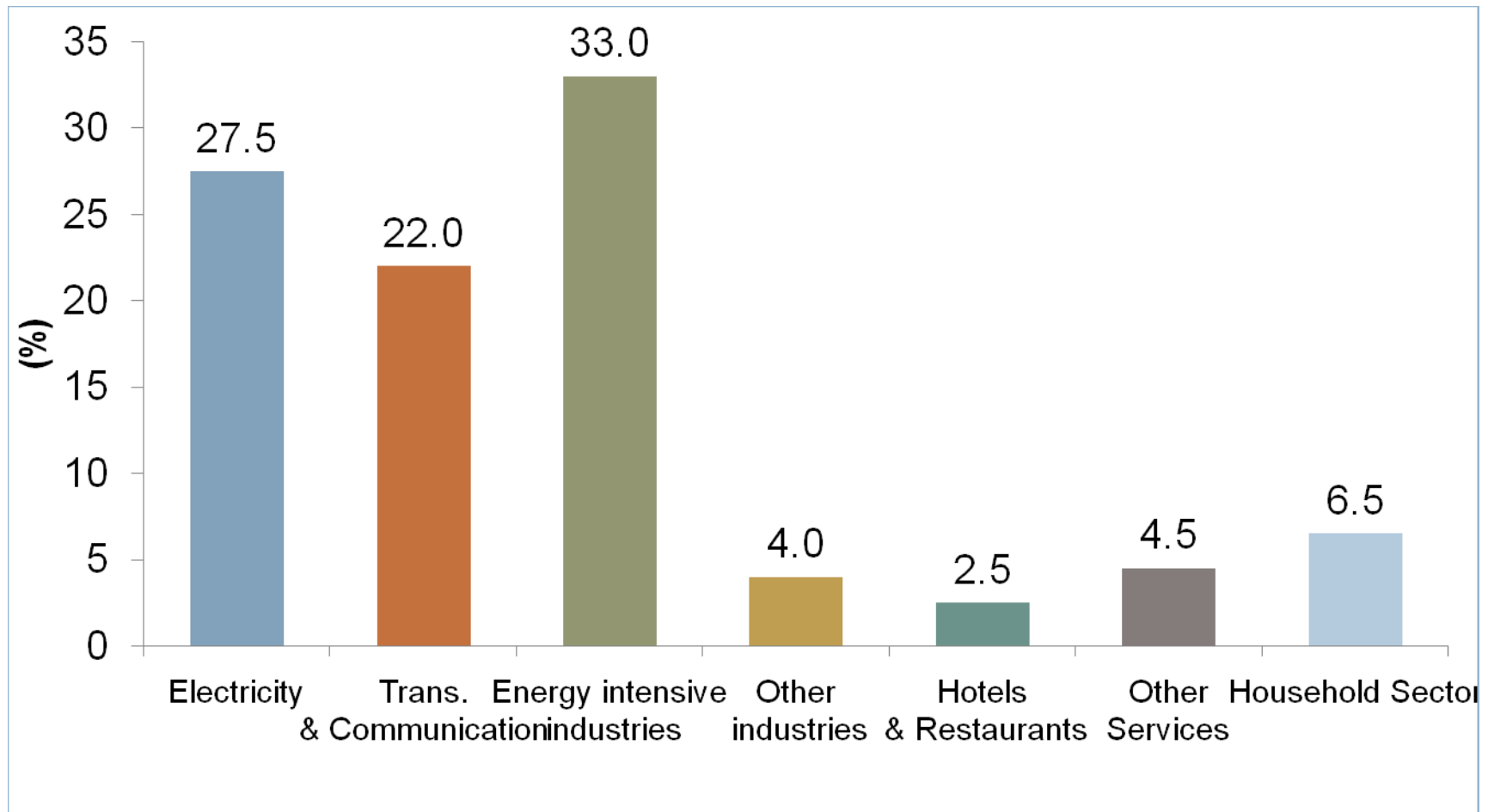
- **The sectors that are represented in the input/output analysis consist of:**
 - 1) Electricity
 - 2) Energy intensive industries
 - 3) Other industries
 - 4) Transport and communications
 - 5) Hotels and restaurants
 - 6) Construction
 - 7) Other Services

That, in addition to the petroleum products (natural gas, fuel and diesel oil, LPG and gasoline).

What is the impact of phasing out petroleum subsidies on consumer prices?

23

The share of each sector in total consumption of petroleum products



Source: Abouleinein et al. (2009) based on the updated Input-Output Table 2006/2007

What is the impact of phasing out petroleum subsidies on consumer prices?

24

Increases in prices of petroleum products under two alternative scenarios

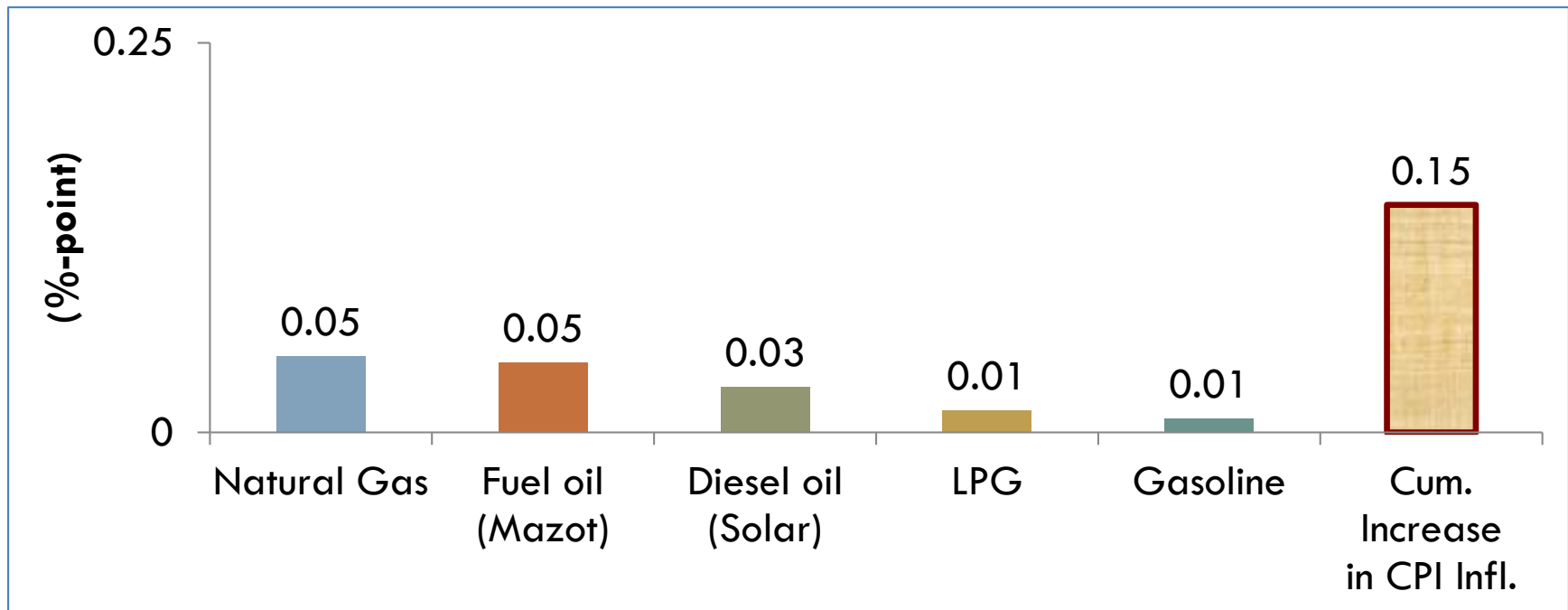
Unit of measurement	Petroleum Product	Current price of petroleum products (in LE)	Scenario 1: Increase in prices of petroleum products by 10%		Scenario 2: Adjusting prices according to actual domestic cost (such that subsidy = 0)	
			Percent Increase	Calculated price after increase (in LE)	Percent Increase	Calculated price after removing subsidy (in LE)
M3	Natural Gas	0.24	10%	0.264	91.7%*	0.46
Ton	Fuel oil (mazot)	1000	10%	1100	49.5%	1495
Liter	Diesel oil (solar)	1.1	10%	1.21	133.64%	2.57
Cylinder	LPG	2.5	10%	2.75	1346.4%	36.16
Liter	Gasoline	1.44	10%	1.584	73.09%	2.5

*Here we consider phasing out subsidy of natural gas used for electricity only. That is because electricity is the main consumer of natural gas. The price of gasoline is a weighted average.

What is the impact of phasing out petroleum subsidies on consumer prices?

25

The contribution to CPI inflation if the price of each petroleum product is increased separately by 1%



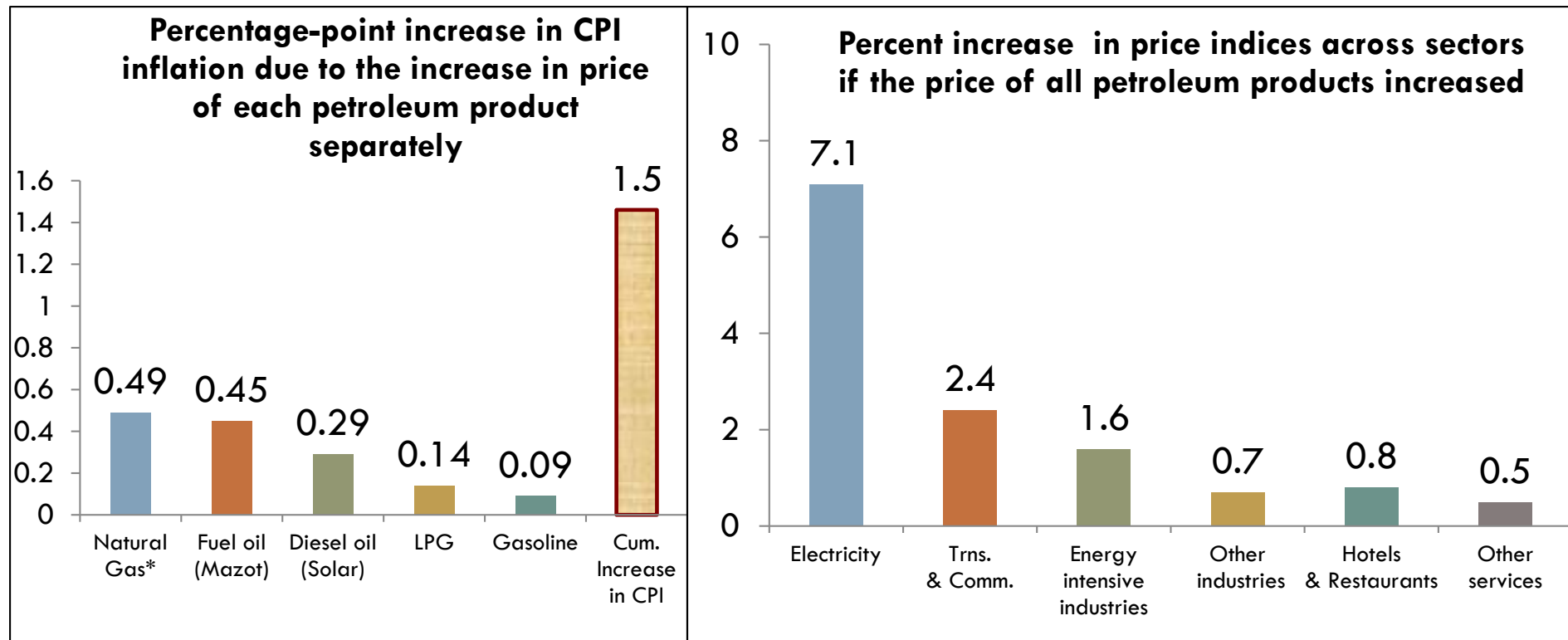
Note: Last column (cumulative increase in CPI) is the %-point increase in CPI if prices of **all** petroleum products was increased by 1%.

Source: Calculated based on Abouleinein et al. (2009)

What is the impact of phasing out petroleum subsidies on consumer prices?

26

Scenario 1: Raising the price of each petroleum product by 10%



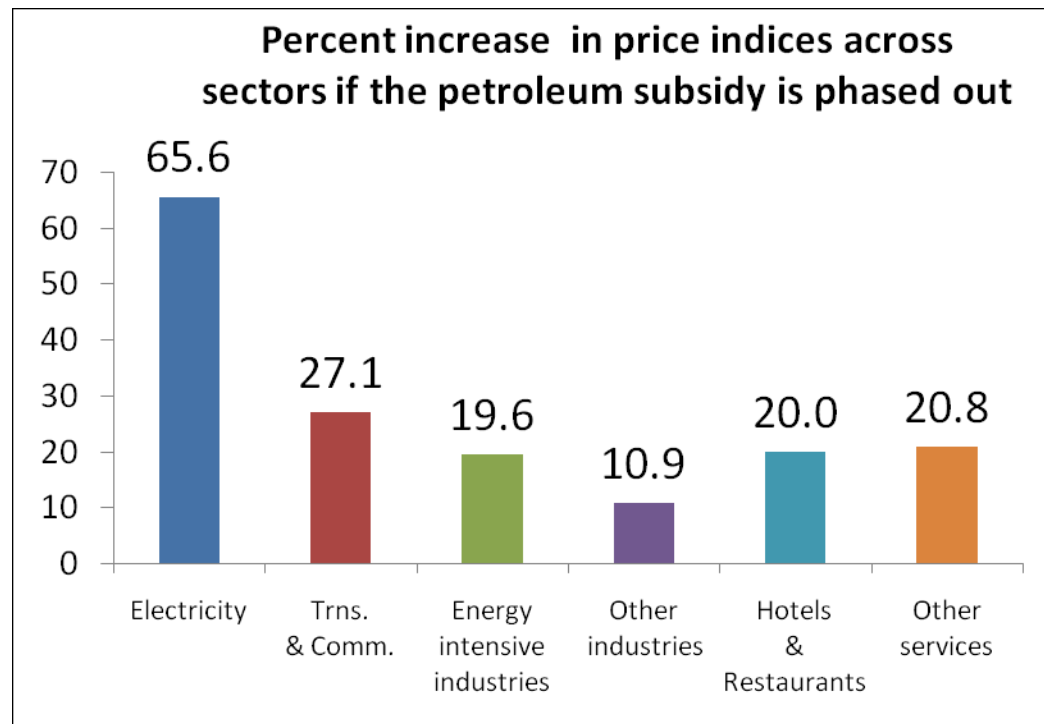
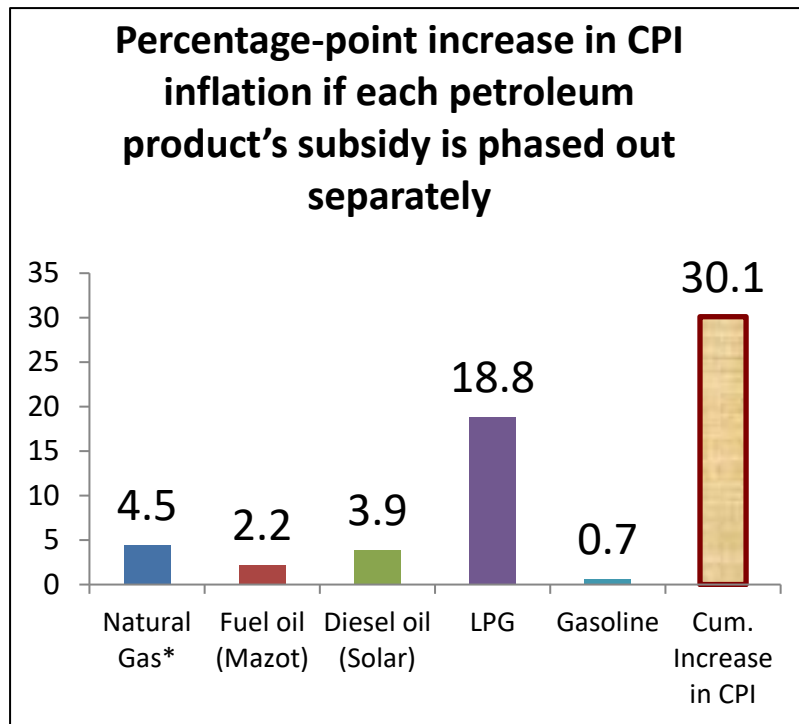
Source: Abouleinein et al. (2009)

Note: Last column of the left panel (cumulative increase in CPI) is the %-point increase in CPI inflation if prices of *all* petroleum products are increased by 10%.

What is the impact of phasing out petroleum subsidies on consumer prices?

27

Scenario 2: Removing subsidy of each petroleum product



Note: *Natural Gas is for electricity only.

Source: Calculated based on Abouleinein et al. (2009)

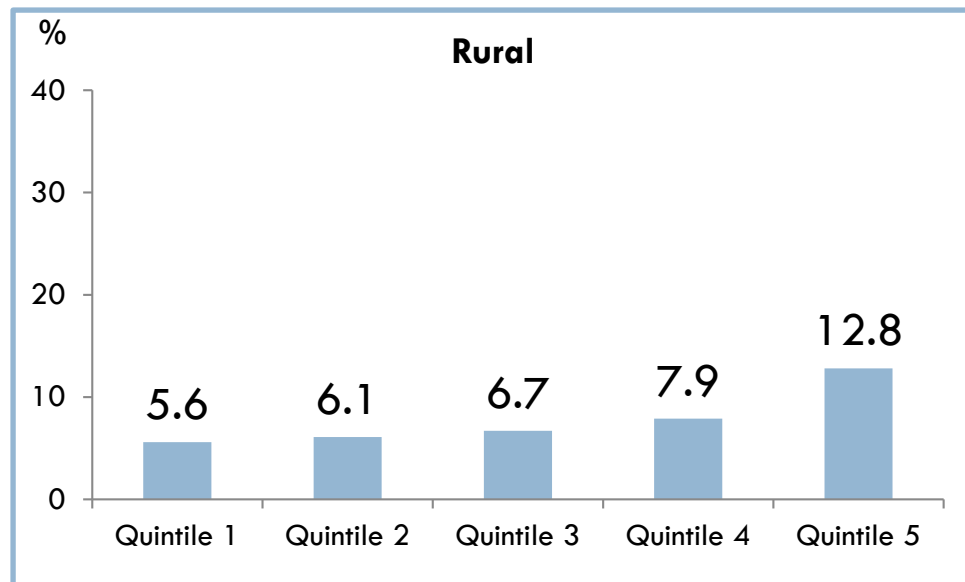
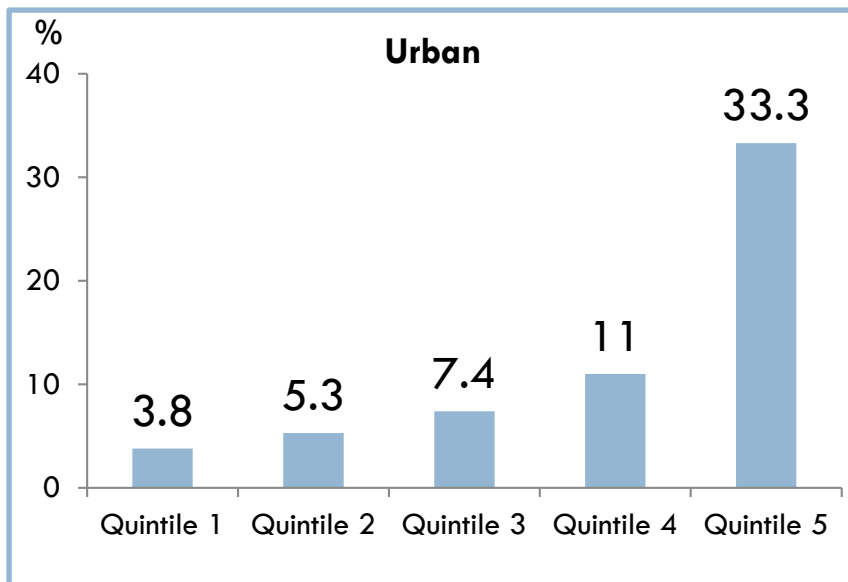
Note: Last column of the left panel (cumulative increase in CPI) is the %-point increase in CPI inflation if all petroleum subsidies are removed completely.

Who benefits from the petroleum subsidy?

28

Distribution of petroleum subsidy by expenditure quintiles in urban and rural Egypt

- The richest urban quintile benefits from 33 percent of these subsidies, while the poorest urban quintile benefits from only 3.8%.
- Raising the price of natural gas and fuel oil (mazot) affects the lower expenditure quintiles more. Both (Natural gas and mazot) account for only 13% of total petroleum subsidies.



What are the alternatives of phasing out the subsidy?

29

- A CGE model was applied to experiment 4 alternative scenarios to a Reference Path.
- The 4 scenarios assume that the subsidy is gradually reduced, until it is completely eliminated in 2012/2013.

Scenario 0: *Reference Path*: maintaining the subsidy, and continuing the economic policies and development trends that are planned for the period 2007/08-2012/13.

What are the alternatives of phasing out the subsidy?

30

Scenario 1: Adjustment of petroleum product prices gradually; no compensations.

Scenario 2: Adjustment of petroleum product prices with the increased government cash transfers to the poorest two quintiles (poorest 40%) by 20% in both urban and rural areas.

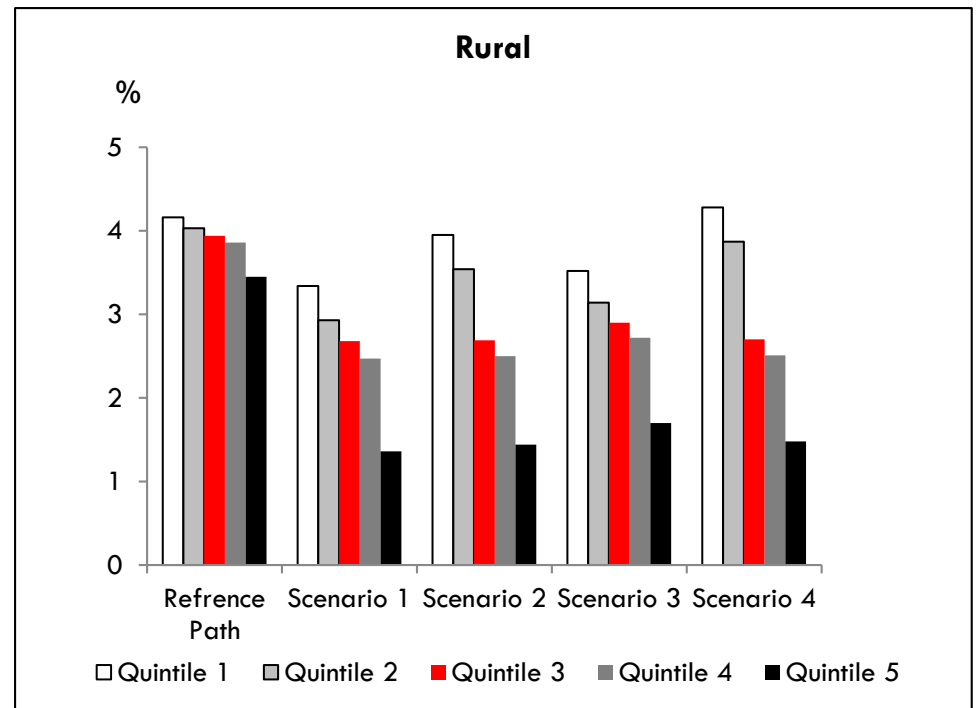
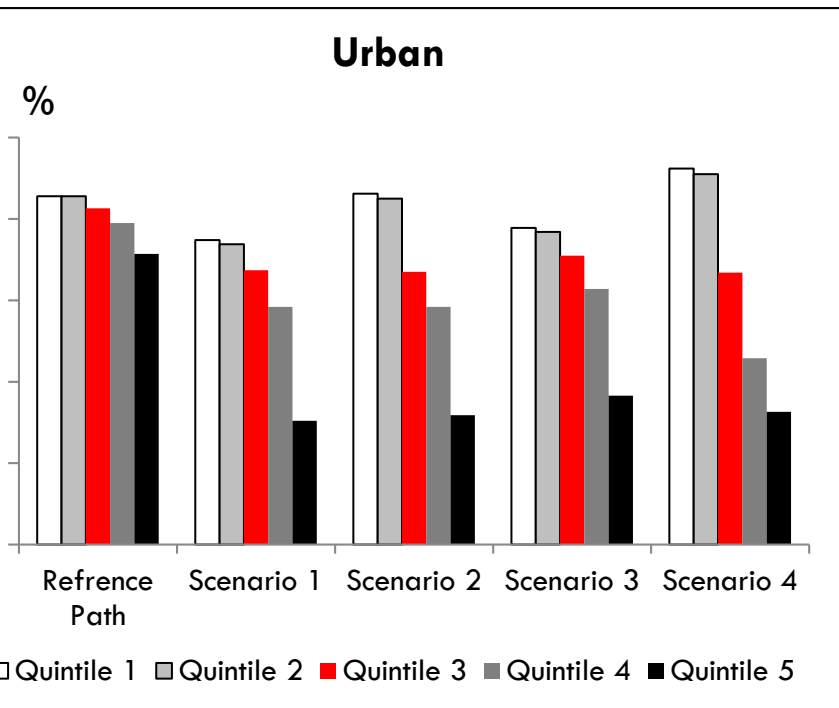
Scenario 3: Adjustment of petroleum product prices, and 50% of energy subsidy savings are transferred to all households (untargeted).

Scenario 4: Adjustment of petroleum product prices, and 50% of energy subsidy savings are transferred and targeted to the poorest two quintiles in both urban and rural areas.

What are the alternatives of phasing out the subsidy?

31

Average annual growth rates of total consumption of Households by quintiles



The reference path shows very small disparity between consumption of highest & lowest quintiles. However, Scenario 4 shows the largest disparity. This suggests that under the reference path, subsidization is untargeted, and thus is not equitable, whereas scenario 4 seems more in favor of the poorest.

What are the alternatives of phasing out the subsidy?

32

- Inequality is measured as the ratio between consumption of the richest and poorest quintiles (where the smaller measure indicates less inequality).

Scenario	Urban		Rural	
	Base yr	2012/2013	Base yr	2012/2013
Reference Path	5.10	4.9	3.43	3.30
Scenario 1	5.10	4.56	3.43	3.10
Scenario 2	5.10	4.46	3.43	3.03
Scenario 3	5.10	4.59	3.43	3.12
Scenario 4	5.10	4.43	3.43	3.01

- Income distribution measures are the highest in the Reference Path, signaling the highest level of inequality, compared to all four scenarios.
- The ratio of rich to poor consumption is the lowest in Scenario 4, where the petroleum subsidies are phased out, while 50% of the savings are directed to the most needy groups.

Bottom line: Inequality measures improve when subsidy is removed while the poor get compensated .

Lessons learned from International Experiences

33

International experiences indicate that the reform of the price structure of petroleum products should be preceded and complemented by some measures, including the following:

- 1 - Launching an awareness campaign, focusing on (Indonesia's experience):
 - Explaining the need for, and the reasons behind the price adjustment.
 - Identifying winners and losers.
 - Announcing clear measures to compensate the losers.

Lessons learned from International Experiences

34

- 2- Evaluating the impact of this reform on the poverty rate, health, and environment. That, in addition to identifying the group that should be targeted to receive compensatory assistance.
- 3- Reforming social aid programs in order to better address the needs of the poor target groups.
- 4- Determining the amount (or the level) of assistance needed for each target group.
- 5- Determining the suitable mechanisms to assist each target group, and identifying the administrative capacity needed for each.
- 6- Considering further indirect compensatory measures.
- 7 – Determining the time frame to implement the petroleum price adjustment program.

Lessons learned from International Experiences

35

The following mechanisms were implemented in several countries to support the targeted groups:

- 1- Direct cash transfers.
- 2- Direct transfers using smart cards or coupons.
- 3- Short-term indirect compensatory measures.
(International experiences to follow)

Lessons learned from International Experiences

36

Examples of indirect compensatory measures for increases in energy products prices:

Country	Indirect compensatory measures
Bolivia	Distribution of LPG through community-based organizations.
China	Assistance to specific sectors (e.g. agriculture, transport and fisheries)
Malaysia	Low transport tariffs
Ghana	Support to education, health, transport and electricity in rural areas
Jordan	Support to salaries (e.g. officials, retired)
Sri Lanka	Grants and foodstuffs
Vietnam	Assistance for fishermen

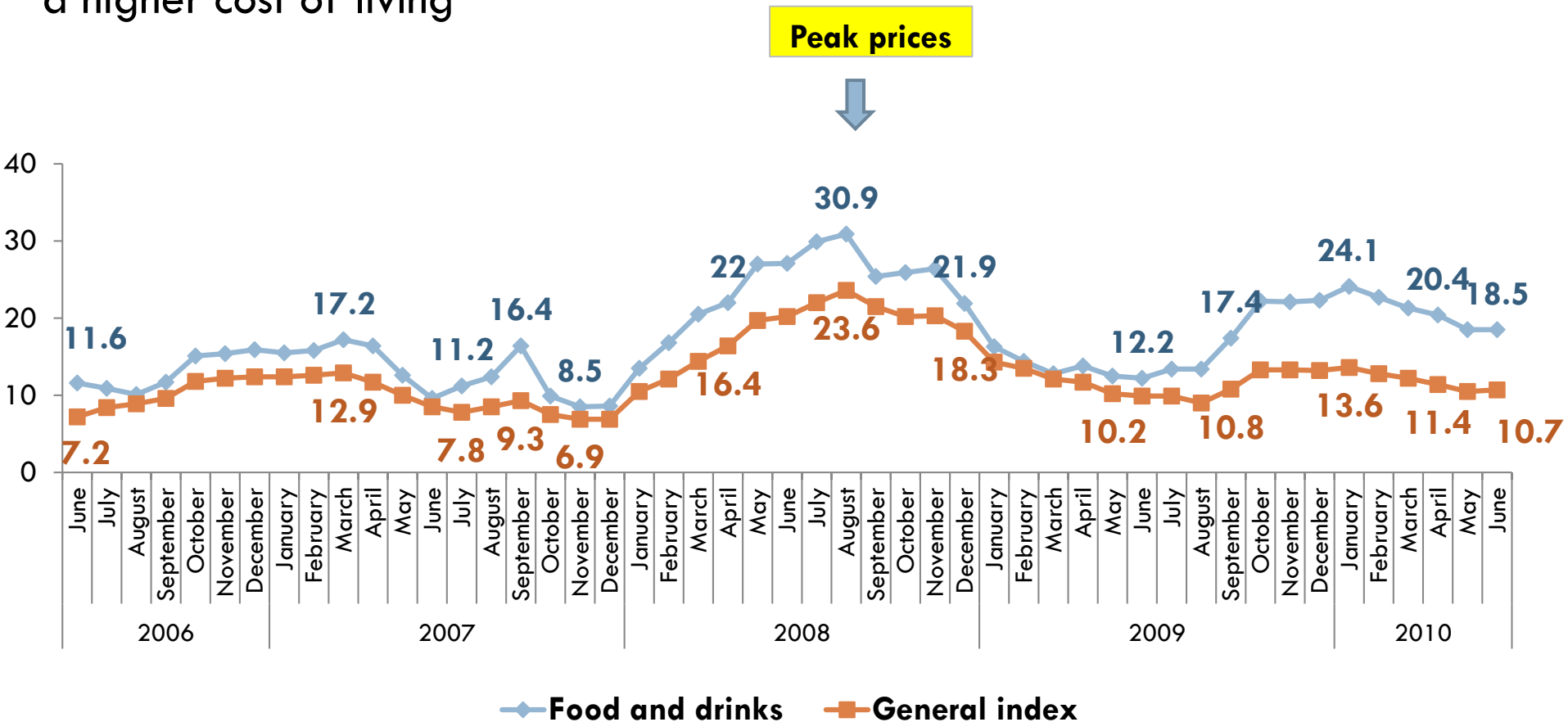
37

Food Subsidy *

Developments in food and consumer prices

38

- Soaring global food prices were reflected in escalating domestic food prices (which constitute almost half the Consumer Price Index (CPI) basket), resulting in a higher cost of living



Developments in food and consumer prices (Cont'd)

39

- From February 2007 to February 2008, the impact of food price inflation on overall inflation in Egypt was large:

	Food Price contribution to total inflation	Total inflation
Egypt	5.6	9.5
China	6.5	8.7
Pakistan	7.6	10.6
Bangladesh	9.2	10.3
Kenya	12.4	15.4
India	1.9	4.6

Developments in food and consumer prices (Cont'd)

40

Food absorbs 41.5 percent of total household expenditures and accounts for 54 percent of total expenditures of the poorest Egyptian households.

	Share of food expenditures in HH budget (%)
Egypt	41.5
China	28
Haiti	52
Malawi	58
Bangladesh	62
Kenya	51
India	33

Food price shock and the fiscal budget in Egypt

41

- The impact of the price shock was most significant on the middle and lower income groups in the Egyptian society.
- The result was higher price pressures that required additional resources
 - to alleviate the impact of such price shock on the most vulnerable social groups and
 - to preserve social and economic stability.
- As such, the Egyptian Parliament endorsed Law number 114/2008 with the objective of enacting sustainable revenue measures to offset the additional budgetary outlays associated with higher spending on wages, pensions, and food subsidies in excess to what was originally proposed in the government's 2008/09 draft budget.

Food price shock and the fiscal budget in Egypt (Cont'd)

42

- Details of additional costs and financing sources of higher wages, pensions and subsidies bills (Values in LE billion)

Additional cost	2007/08	2008/09	Financing sources	2007/08	2008/09
Increasing monthly take home salary by 30% of base wage	1.1	0.2	Reducing energy subsidies and increasing sales tax on petroleum products	1.3	7.5
Increasing maximum rewards for local government employees	0.4	3	Increasing sales tax on cigarettes	0.2	1.3
Disbursing additional quantities of rice, edible oil and sugar on rationed cards	0.2	1.6	Increasing vehicle licensing and registration fees	0.2	1.1
Increasing monthly pensions by 20% with maximum LE 100	0.6	3.6	Increasing fees on quarries	0.2	1
Increasing energy subsidies	4		Seizing tax exemptions on power intensive industries in free zones	0.1	0.6
			Seizing tax exemptions on T-bills interest income	0.1	1
			Higher tax receipts and dividends from EGPC	2.7	
			Other	1.5	
Total additional uses	6.3	14.4	Total additional sources	6.3	14.4

The structure of the food subsidy system

43

- Food subsidies are provided through two main channels:
 - the subsidy for “baladi” bread (82 percent extraction rate) which is universal and
 - the ration cards which offer eligible households a pre-determined monthly quota of basic foodstuffs (including rice, sugar and edible oil) for a maximum of four persons registered on each card.
- The table below indicates the prices of the subsidized, partially subsidized and non subsidized bread types:

Bread type	Flour used	% of all produced bread	number of bakeries	Price
Full subsidized bread	Flour 82%	75%	19,000	LE 0.05 per loaf (130 gram)
Half subsidized bread (tabaki)	Flour 76%	15%	5,000	LE 0.10 per loaf (80 gram) LE 0.15 per loaf (150 gram)
White bread (not subsidized)	Flour 72%	10%	--	LE 0.25 per loaf

Increase in subsidies with international prices

44

- Food subsidy in Egypt, 2005/06- 2010/11

	2005/06	2006/07	2007/08	2008/09	2009/10 Estimated	2010/11 Budget
In billions of LE	9.4	9.4	16.4	21.07	16.82	13.58
In percent of GDP	1.5	1.3	1.8	2.02	1.4	0.98

Increase in subsidies with international prices (Cont'd)

45

- Dramatic rises in global prices **since mid 2006** have increased the food subsidy ratio to GDP from 1.3 percent in 2006/07 to 1.8 percent in 2007/08 and 2.02 percent in 2008/09
- Part of the increase in the subsidy bill is due to
 - the increase of ration quantities and
 - the expansion of ration cards coverage.
- In response to soaring food prices:
 - The government decided in **2008** to update the registration for the food subsidy program to allow those born after 1989 to be registered in the system of ration cards.
 - An extra 22 million people were added, expanding the coverage of the ration card subsidy system to nearly 69.2 million beneficiaries by November 2008.
 - In addition, the quantities of subsidized food items for all ration cards were increased.
 - As of November 2008, ration cards supply additional quantities of rice, sugar and vegetable oil, at prices well below their free market value

Increase in subsidies with international prices (Cont'd)

46

- Nearly 69 percent of the 2008/09 food subsidy bill is allocated to baladi bread, while 31 percent is dedicated to other subsidized items, including sugar, rice and edible oil through the ration card system.

- Fiscal cost of food subsidies in 2006/07, 2007/08 and 2008/09 (LE million, nominal)**

	2006/07	2007/08	2008/09
– Imported wheat	4496	11397	8085
– Domestic wheat	2562	2681	4970
– Maize	247	292	943
– Fino bread	173	281	8
– Flour	512	513	200
Total Bread Subsidy	7990	15164	14206
– Rationed oil	649	1099	2352
– Local sugar	1094	1137	2208
– Free edible oil	292	945	1288
– Rice	471	754	577
– Tea	-3	-13	6
Other subsidized food	2503	3922	6437
Total subsidy	10493	19086	20637

Subsidies and social equity

47

- Four out of five households in Egypt purchase subsidized baladi bread
- 67 percent have ration cards
- The three middle quintiles have the largest share of households that purchase baladi bread
- On the other side, the share of ration card holders decreases as expenditure increases.
- Since, baladi bread is available for everybody while certain criteria are used to exclude the rich from ration card system.

Percentage of households receiving food subsidies by quintiles

	Per capita expenditure quintile					Average
	1	2	3	4	5	
Baladi bread	78.01	80.96	83.80	84.86	77.74	81.01
Ration cards Food Items	75.99	73.33	71.54	67.67	57.38	67.60

Subsidies and social equity

48

Other problems in the bread subsidy:

- Flour is highly subsidized to the bakeries and as a result it leaks to the black market.

This is mainly attributed to the large number of bakeries which make it difficult for monitoring.

	Full subsidized Flour (82%)	Half subsidized Flour (76%)	Not subsidized Flour (72%)
sold to bakeries	160 LE/ton	900 LE/ton	2500 LE/ton
sold on black market	1750 – 2000 LE/ton	1200 LE/ton	—

- Subsidized bread is cheaper than animal feed:
 - ❖ Many Egyptian cattle and poultry growers abuse the effort of the government to provide subsidized bread for low income groups and use it to feed their animals.
 - ❖ This creates bread shortages and brings to light the weakness of a state subsidized economic model.

Subsidies and social equity

49

- Food subsidies are poorly targeted and unnecessarily expensive, resulting in substantial leakage of resources to high-income households.

- Per capita absolute benefits of food subsidies per annum

	1	2	3	4	5	Average
Subsidies for baladi bread	123.0	134.9	146.9	164.4	167.8	147.4
Rice	17.4	20.1	20.9	21.5	22.1	20.4
Wheat	45.0	29.8	19.2	13.6	7.7	23.1
Oil	42.2	49.5	53.8	58.4	59.9	52.7
Sugar	25.9	27.9	29.2	29.9	28.6	28.3
Tea	4.5	4.5	4.2	4.9	4.3	4.5
All subsidies	257.9	266.6	274.3	292.9	290.5	276.4
Per capita consumption	1714.0	2423.6	3032.5	3887.0	7503.7	3712.1
Total subsidies as percentage of total consumption	15.0	11.0	9.0	7.5	3.9	7.4

International comparison of food subsidies

50

- Despite the longstanding provision of in-kind food subsidies in Egypt and the expansion of the overall coverage of the food subsidy program over the past number of years, poverty continues to rise and a large proportion of people remain highly vulnerable to food insecurity and malnutrition.

- Subsidies and transfers spending and indicators for Egypt and selected countries:

Country	Per capita subsidies and transfers spending (in US\$ PPP adjusted)	GINI coefficient	Malnutrition prevalence (weight, percent of children under 5)	Poverty headcount ratio at \$2 a day (PPP) (in percent of population)
Egypt	230.4	34.4	8.6	43.9
Jordan	145.4	38.8	4.4	7.0
Morocco	40.0	39.5	10.2	14.3
Tunisia	184.1	39.8	4.0	6.6

Concluding Remarks

- The current subsidy system entails a lot of waste in government resources.
- Subsidies could be gradually phased out, mindful the implications on vulnerable groups and price inflation.
- Complementary policies should aim at mitigating the effects on inflation and inequity.
- In parallel, a system should be developed to ultimately replace price subsidies with direct cash or in-kind transfers.

Concluding Remarks

- The Government's objective to reduce the overall deficit by about 5 percent of GDP (to about 3 percent) by FY 2014/15 is critical to achieving private sector-led growth and reducing vulnerabilities.
- Such objective is feasible, based on the experience of other countries, and would lead to a further 15 percentage point decline in the debt-to-GDP ratio, currently estimated at 74 percent.

Concluding Remarks

- Anchoring the strategy in reforms to increase the low tax revenue-to-GDP and the efficiency of public spending will help durably address main fiscal vulnerabilities.
- Priorities include adopting as early as possible a full-fledged VAT, complementing subsidy reform with better-targeted transfers to the most needy, and containing the fiscal cost on the pension and health reforms.
- Such adjustment will be crucial to maintain investor confidence, preserve macroeconomic stability and create space for countercyclical fiscal policy, which proved to be effective during the global financial crisis.