

Compensation Mechanisms for Fuel Subsidy Removal in Nigeria

GSi REPORT





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Executive Summary

The reform of the fuel subsidy regime is fundamental to the overhaul of the Nigerian economy and achievement of inclusive—and sustainable—economic diversification and growth. In recent years, fuel subsidy has taken up over a third of the recurrent budget, constituting a huge waste of resources that could have been spent more effectively on pro-poor interventions in the economy. Fear of the political consequences of large price increases coupled with widespread corruption and pressure from those benefiting from the fuel subsidy regime have made successive governments hesitant to reform the system. However, there has been a growing consensus on the imperative of reform, at the heart of which is the elimination of fuel subsidies.

When it was initially conducted in the summer of 2015, the main objective of this study was to conduct a detailed analysis of the compensation mechanisms that could be used to mitigate the impact of fuel subsidy removal on weak and vulnerable segments of Nigerian society, as an input to government planning around upcoming reforms. Since this time, the Buhari government has introduced major reforms to gasoline and kerosene subsidies, with the a new “price modulation” policy that has seen upward adjustments in the price of both fuels in early 2016—at the same time that major problems with supply continue, driving domestic prices above official levels in many areas. In the light of the current policy content as of mid-2016, the findings of this study are as relevant as ever: suggesting actionable proposals that the government could pursue if it decides that it must mitigate the social impact of ongoing future price increases; and also suggesting pro-poor policies where the government could invest as part of its general budgeting, given the fiscal space created by subsidy reforms.

The analysis is driven by the imperative of achieving a more efficient way of reallocating the fuel subsidy budget for developmental activities that directly benefit the poor. The study’s methodological approach draws on extensive work already done on the reform of fuel subsidy in Nigeria and other countries (e.g., by the Facility for Oil Sector Transparency in Nigeria (FOSTER), the Center for Public Policy Alternatives (CPPA), the Global Subsidies Initiative (GSI), World Bank and the International Monetary Fund (IMF). It consists of analyzing third-party documentation about various existing mechanisms in Nigeria that can be used to compensate the poor for the adverse effects of economic policy, supplemented by a series of Key Informant Interviews (KIIs) with major stakeholders involved in the implementation of these mechanisms. The analysis also draws on a review of international experiences with compensation mechanisms related to subsidy reform, focused on countries comparable to Nigeria, and considers the effectiveness of compensation mechanisms applied by Nigerian governments around past domestic price reforms.

The findings of this study suggest that a portfolio approach to compensating the poor would be most beneficial for addressing the impact of fuel subsidy removal. A portfolio of compensation mechanisms could include the following measures, which could be combined as appropriate for the needs and capacity of each state and the Federal Capital Territory.

1. Transport vouchers
2. Mass transit schemes
3. E-Wallet for smallholder farmers
4. Free school meals for school children
5. Free health care for the vulnerable
6. Cash transfer scheme
7. Vocational skills development program



The compensation measures would have to be implemented without political interference or discrimination based on ethnicity, religion, gender or any other bias. The findings of the study also indicate that creating new institution(s) to manage the compensation schemes is unnecessary. Existing relevant ministries, departments and agencies (MDAs) with mandates relevant to these programs should be repositioned and strengthened to take on these responsibilities. A new Directorate for Subsidy Reinvestment Monitoring (DSRM) should be created under the National Planning Commission (NPC). The DSRM may not have access to the Subsidy Reinvestment Fund but should have the mandate and resources to monitor programs financed by the subsidy fund. The subsidy fund should be domiciled in the Office of the Vice President to assure high-level oversight of fund allocation. Since the Vice President is the Chairman of the NPC, the periodic report of the DSRM should be submitted directly to him through the Minister of National Planning who, as per the 1999 constitution, is the Deputy Chairman of the NPC.

Based on the findings of this study, there should be a coordinating department and principal implementing agencies for the implementation of each of the fuel subsidy removal compensating programs.¹ Initial estimates suggest that the proposed eight programs could be implemented with a budget not exceeding ₦250 billion (USD 1.2 billion)² at the year of inception of the programs, while the cost should reduce in subsequent years.³

¹ The relevant institutions that may be involved in the implementation of the compensation programs are presented in Table 17.

² Unless otherwise stated, all NGN to USD exchange conversions in this paper are based on average annual interbank bid prices for the year in question. The only exception to this is in the case of NGN costs specific to fuel prices in 2016, where average monthly interbank bid prices have been used. This is in recognition of the significant weakening of the naira within 2016 and the relationship this has had on the need to adjust fuel prices. All exchange rates are taken from www.oanda.com/currency/average

³ The summary of the cost estimates for the programs is presented in Table 18.



Table of Contents

1.0 Introduction	1
1.1 Background	1
1.2 Objectives of the Project	2
1.3 Approach to the Study	2
1.4 Structure of the Report	3
2.0 Overview of the Fuel Subsidy Regime in Nigeria	4
2.1 Domestic Market for Petroleum Products	4
2.2 Fossil Fuel Subsidies in Nigeria	5
2.3 Political Economy of Fossil Fuel Subsidies in Nigeria	10
3.0 International Experiences of Social Protection for Fuel Subsidy Reform	14
3.1 Pathways of Impact of Fuel Subsidy Reform	14
3.2 Policy Tools Used to Mitigate Impacts of Fuel Subsidy Reform on Low-Income Households	15
3.3 Energy Subsidy Reform and Social Protection in Sub-Saharan Africa: Selected experiences	17
3.4 Detailed Country Case Studies	18
3.4.1 Brazil	18
3.4.2 Ghana	20
3.4.3 India	22
3.4.4 Indonesia	25
3.4.5 Iran	29
3.4.6 Implications for Subsidy-Related Social Protection in Nigeria	33
4.0 Review of Compensation Mechanisms Adopted by Nigerian Governments	36
4.1 Poverty Status and Energy Use	36
4.2 Compensation Mechanisms to Cushion the Impact of Hikes in Fuel Prices	38
4.2.1 Pre-SURE P Compensation Mechanisms	38
4.2.2 SURE-P Mechanisms	42
4.3 Other Social Protection Programs	43
4.3.1 Free Basic Education	43
4.3.2 Mass Transit Program	44
4.3.3 Fertilizer E-Wallet Program	45
4.3.4 NAPEP Project Care of the People' (COPE) Conditional Cash Transfer Program	46
4.3.5 Family Economic Advancement Program (FEAP)	47
4.3.6 National Directorate of Employment (NDE) Programs	48
5.0 Options for Compensating Vulnerable People for Fuel Subsidy Removal	50
5.1 Transport Vouchers	51
5.2 Mass Transit Schemes	52
5.3 E-Wallet for Smallholder Farmers	53
5.4 Free School Meals for School Children	54
5.5 Free Health Care for the Vulnerable	54
5.6 Cash Transfer Scheme	55
5.7 Vocational Skills Development Program	56
5.8 Institutional Framework for Program Implementation	57
6.0 Conclusion	60
References	62



List of Acronyms

AGO	Automotive Gas Oil	NDE	National Directorate of Employment
ATK	Aviation Turbine Kerosene	NEEDS	National Economic Empowerment and Development Strategy
CPPA	Centre for Public Policy Alternatives	NGOs	Non-Governmental Organizations
COPE	Care of the People	NISER	Nigeria Institute of Social and Economic Research
DSRM	Directorate for Subsidy Reinvestment Monitoring	NLC	Nigeria Labour Congress
ECA	Excess Crude Account	NNPC	Nigerian National Petroleum Corporation
EOMP	Expect Open Market Price	NPC	National Planning Commission
FCT	Federal Capital Territory	OFN	Operation Feed the Nation
FGN	Federal Government of Nigeria	OPEC	Organization of the Petroleum Exporting Countries
FOSTER	Facility for Oil Sector Transparency in Nigeria	OSSAP	Office of Senior Special Assistant to the President
FME	Federal Ministry of Education	PHRC	Port Harcourt Refining Company
GoI	Government of India	PMS	Premium Motor Spirit
GSI	Global Subsidies Initiative	PPPRA	Petroleum Products Pricing and Regulatory Agency
HHK	Household Kerosene	PSF	Petroleum Support Fund
IISD	International Institute for Sustainable Development	PTF	Petroleum Trust Fund
IMF	International Monetary Fund	SURE-P	Subsidy Reinvestment and Empowerment Program
KIIs	Key Informant Interviews	TETFund	Tertiary Education Trust Fund
KRPC	Kaduna Refining and Petrochemicals Company	UBE	Universal Basic Education
LPFO	Low Pour Fuel Oil	UBEC	Universal Basic Education Commission
LPG	Liquefied Petroleum Gas	WDI	World Development Indicators
MDAs	Ministry, Department and Agencies	WRPC	Warri Refining and Petrochemicals Company
MDGs	Millennium Development Goals		
NAPEP	National Poverty Eradication Program		
NBS	National Bureau of Statistics		



1.0 Introduction

1.1 Background

Nigeria's petroleum product subsidies were introduced in 1977 by the military government as a short-term cushion for the rising international oil price. It was intended as a temporary fiscal response to an oil price spike instigated by the actions of Organization of the Petroleum Exporting Countries (OPEC), but has been retained by subsequent governments as a mechanism for stabilizing domestic fuel prices and providing a more visible economic benefit to the people.

Because fuel prices are fixed at a nominal value, inflation and the subsequent devaluations of the naira have progressively increased the value of the subsidy. As a result, the subsidy budget has grown and become increasingly unsustainable. The subsidy frequently strains the budget, forcing the government to resort to increasing the price of fuel at the pump. However, this provides only temporary respite, as the subsidy soon starts to accumulate again. When international prices rise—as they did between 1999 and 2012 (with the exception of the period immediately following the financial crisis)—the subsidy bill escalates rapidly.

Since the advent of democratic governance in 1999, upward adjustment of domestic prices of fuel is often accompanied by civil unrest and mass action by the population. The most recent example of this was on January 1, 2012, when the federal government more than doubled the fuel price from ₦65 to ₦145 (USD 0.41 to USD 0.91) per litre in a bid to completely remove the subsidy on refined petroleum products. This led to widespread protests and a 10-day national strike that ended when the government partially reversed the increase, by reducing the price to ₦97 (USD 0.61) per litre.

In recent years, the fuel subsidy has taken up over a third of the recurrent budget, constituting a huge waste of resources that could have been spent more effectively on pro-poor interventions in the economy. Fears of the political consequences of large price increases—coupled with widespread corruption and pressure from those benefiting from the fuel subsidy regime—have made successive governments hesitant to reform the system.

Most recently, the fall in international crude oil prices has created a window of opportunity for reform for two reasons. First, it allows the government to remove subsidies during a period where this will result in relatively small domestic price increases. Second, it has caused a foreign exchange crisis that places pressure on the economy more generally, which can be relieved to some extent through subsidy reform. As a result, in January 2015 gasoline prices were reduced from ₦97 to ₦87 (USD 0.49⁴ to USD 0.44) per litre (Udo, 2015). In January 2016, further adjustments took place with the price of gasoline decreased to ₦86.5 (USD 0.43) per litre for independent retail stations and ₦86 (USD 0.43) from retail stations run by the Nigerian National Petroleum Corporation (NNPC) (Alohan & Oche, 2015); and the price of kerosene increased from ₦50 to ₦83 (USD 0.25 to USD 0.41) per litre (Ohaeri & Adeyinka, 2016, 2016). In May 2016, the price of gasoline was adjusted upward to ₦145 (USD 0.72) per litre (Gaffey, 2016). The kerosene price was not adjusted at the same time, leading to estimates that an implicit kerosene subsidy had returned (Ohaeri & Adeyinka, 2016). In August 2016, the price of kerosene was increased from ₦83 to ₦150 (USD 0.25 to USD 0.46) per litre (Vanguard, 2016).

The government describes its new policy as a “price modulation” policy, whereby it may adjust prices up or down as needs be in order to reflect changes in international pricing, at times making a profit and other times providing a subsidy (Ohaeri & Adeyinka, 2016). It appears that this is intended to

⁴Note: the USD value of fuel has fallen since nominal prices were set at ₦97 in 2012 due to ongoing devaluation of the naira. This created a growing gap between domestic and international prices, until international fuel prices entered an extended period of decline from late 2014. All NGN values of fuel in 2016 are converted at average monthly interbank bid rates in order to illustrate the extent to which devaluation of the naira has driven ongoing price adjustments.



function without any underlying schedule or price formula. No mitigation measures were provided alongside these recent price reforms, but it may prove necessary for the government to use some form of compensation policy if prices continue to increase. In addition, the government can also consider investing in pro-poor policies more generally as a result of the increased fiscal space created by subsidy reform.

1.2 Objectives of the Project

The main objective of the study is to conduct a detailed analysis of the compensation mechanisms for mitigating the impact of fuel subsidy removal on weak and vulnerable segments of the Nigerian society. The study analyzes various options for compensation and suggests actionable proposals for the government.

1.3 Approach to the Study

Based on the findings of previous studies and the examination of new evidence, this study undertakes an in-depth analysis of the compensation mechanisms for fuel subsidy removal in Nigeria. This analysis is driven by the imperative of achieving a more efficient way of reallocating the fuel subsidy budget for developmental activities that directly benefit the poor. The study's methodology draws on extensive work already done on the reform of fuel subsidy in Nigeria and other countries (e.g., by the Facility for Oil Sector Transparency in Nigeria (FOSTER), the Center for Public Policy Alternatives (CPPA), the Global Subsidies Initiative (GSI), World Bank, and International Monetary Fund (IMF)).

The methodology also draws on documentary analysis of various mechanisms for compensating the poor for adverse effects of economic policy, supplemented by Key Informant Interviews (KIIs) of major stakeholders involved in the execution of pro-poor programs and projects. The documentary analysis includes the review of international and Nigerian experiences of compensation mechanisms for improved budget performance, especially relating to projects and programs that foster social protection. The international experiences are drawn from case studies of countries that have embarked on reform of fuel subsidies. The case studies were purposively selected to cover a range of key criteria that are relevant to Nigeria. These criteria are: countries that are resource-rich; have large populations; have limited institutional capacity to support social protection programs; and belong to the category of middle-income economies. Nigeria is currently classified as a lower-middle-income economy, and hence the focus on middle-income economies as comparators for the purpose of drawing lessons for the envisaged reform. Based on data availability, countries selected for the case studies and the criteria for selection are reported in Table 1. The experience of fossil fuel subsidy reform and compensation measures in a few other sub-Saharan African countries are also highlighted in order to obtain a more robust lesson of experience from relevant countries. These countries are Mozambique, Namibia, Niger, Kenya and Uganda.

The KIIs were carried out to provide insights on Nigeria's development programs targeted at helping the poor cope with adverse economic situations in the past. The KIIs gathered data/information on objective(s) of the program; target groups, beneficiaries and costs; operators and mechanism of operation; mode of delivery; effectiveness and level of acceptance; and stakeholders' power relationships.

**Table 1. International case study countries**

Case study focus	Criteria fulfilled
Brazil	Resource-rich; large population; middle-income
Ghana	Resource-rich; limited capacity to provide social protection; lower-middle-income
India	Large population; limited capacity to provide social protection; lower-middle-income
Indonesia	Resource-rich; large population; limited capacity to provide social protection; lower-middle-income
Iran	Resource-rich; limited capacity to provide social protection; middle-income

1.4 Structure of the Report

This section provides the background to the study, research objectives and the methodological approach to the study. Section Two provides the overview of fuel subsidy regime in Nigeria; Section Three presents international experiences of social protection for fuel subsidy reform; Section Four reviews some of the compensation mechanisms adopted by previous Nigerian governments to mitigate adverse effects of economic policy; Section Five presents the proposed programs aimed at compensating the poor following fuel subsidies removal; and the final section concludes the report.



2.0 Overview of the Fuel Subsidy Regime in Nigeria

2.1 Domestic Market for Petroleum Products

While Nigeria is one of the world’s major producers of crude oil, the country’s capacity for refining it is weak. Nigeria currently has four government-owned refineries under the supervision of the Nigerian National Petroleum Corporation (NNPC)—their combined total refining capacity is 470,000 barrels per day.⁵

Two of the refineries are located at Port Harcourt, with capacity to refine 210,000 barrels per day, and are operated by the Port Harcourt Refining Company (PHRC) Limited. The older of the two has a nominal refining capacity of 60,000 barrels per day and was commissioned in 1965, while the new plant with nominal capacity of 150,000 barrels per day was commissioned in 1989. The two other refineries are located in Warri and Kaduna. The Warri refinery was established in 1978, currently has a refining nominal capacity of 125,000 barrels per day, and is operated by the Warri Refining and Petrochemicals Company (WRPC) Limited. The Kaduna refinery has a nominal refining capacity of 110,000 barrels per day and is operated by the Kaduna Refining and Petrochemicals Company (KRPC) Limited.

Domestic consumption of petroleum products averaged 11 million metric tonnes from 2003 to 2013. Meanwhile, production of refined petroleum products averaged 5 million metric tonnes, leaving a significant shortfall of 6 million metric tonnes on average for the period (Figure 1). This gap was filled by importation. Premium Motor Spirit (PMS) (excepting the sharp drop in 2011), averaged 5.4 million metric tonnes from 2004 to 2013 while household kerosene (HHK) imports averaged 1.2 million metric tonnes (Table 2).

The gap between domestic consumption and refining of petroleum products partly reflects capacity utilization deficits in local refineries. Aside from the spurt in 2005 and dip in 2007, capacity utilization of Nigeria’s main refineries ranged from about 20 per cent in 2011 to 26 per cent in 2009 (Table 3). Nigeria’s refineries have been endemically inefficient, having suffered prolonged neglect and frequent breakdowns. Sadly, occasional turnaround maintenance efforts have failed to engineer sustained improvement in refining capacity over the years.

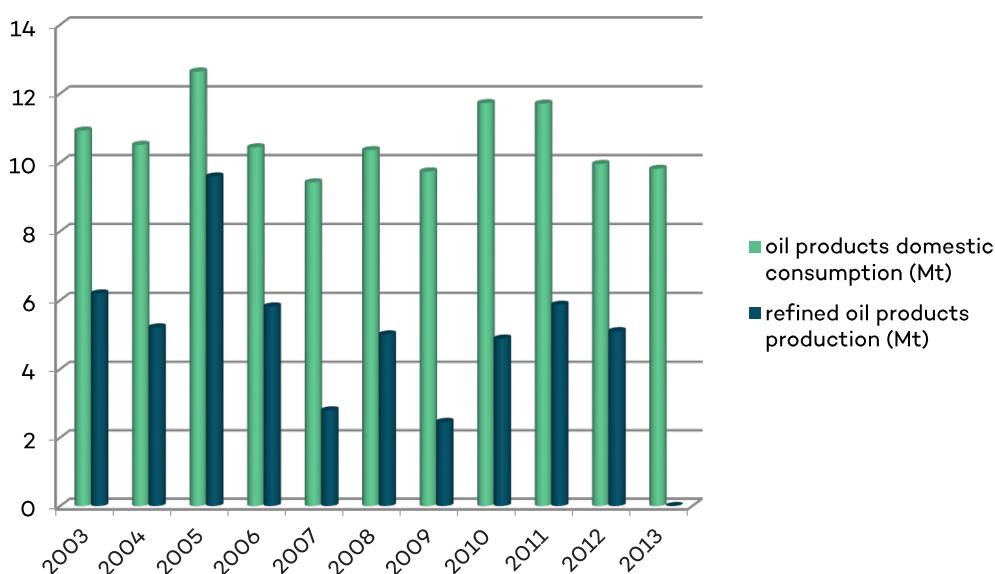


Figure 1. Domestic consumption of oil products and refined oil products production (Mt)

Note: Oil products refer to PMS, HHK and AGO Source: Nigerian National Petroleum Corporation (NNPC), 2013.

⁵ The data on the refining capacity of the four refineries are obtained from the website of the Department of Petroleum Resources (www.dpr.gov.ng).

**Table 2. Petroleum products imports (million metric tonnes)**

Year	PMS	HHK	AGO
2004	5.7	0.42	0.211
2005	5.5	0.67	NA
2006	5.4	1.1	NA
2007	5.8	1.3	NA
2008	4.6	0.91	NA
2009	6	1.2	NA
2010	5	1.6	NA
2011	0.49	0.15	0.12
2012	5.9	2.1	NA
2013	4.4	2.2	0.086

Source: NNPC, 2013.

Table 3. Capacity Utilization of local refineries (%)

Year	KRPC	PHRC	WRPC	Average
2004	26	31	9.1	22.03
2005	33	42.2	54.9	43.37
2006	8.34	50.3	3.9	20.85
2007	0	24.9	0	8.30
2008	19.6	17.8	38.5	25.30
2009	22.1	15.3	41.3	26.23
2010	20.5	9.2	43.4	24.37
2011	22.2	9.2	28	19.80
2012	29.1	12	27.9	23.00
2013	29.3	9.2	36	24.83

Source: NNPC, 2013.

2.2 Fossil Fuel Subsidies in Nigeria

There are two major types of energy subsidy: consumer subsidies designed to reduce the cost of consuming energy, and producer subsidies targeted at supporting domestic production of energy (see Ellis, 2010). Nigeria has been locked into a regime of consumer subsidies for many decades, and the economy is heavily dependent on local and imported technologies powered by fossil fuels. Little is known about the extent subsidies for fossil fuel producers.

Nigeria operates a subsidy regime for gasoline (i.e., Premium Motor Spirit, or PMS) and household kerosene (HHK). As shown in Figure 2, gasoline dominates fossil fuel consumption in Nigeria.

The subsidy on gasoline represents the difference between the market price (called the expected open market price [EOMP]) and the government-approved retail price for PMS which is paid to marketers (CPPA, 2012). The EOMP is normally calculated as the sum of landing costs (all costs incurred up until product purchase, including production in foreign refineries, shipping and port charges), the cost of distribution in Nigeria and the various actors' profit margins, plus taxes. Tables 4 and 5 present the templates showing the breakdown of EOMP and other costs that determine the pump prices of PMS and HHK in May 2015. However, since taxes on imported refined petroleum products are not charged by the government, the current EOMPs do not capture any tax component.



The most recent period of change in Nigeria’s subsidy policy began in January 2016, when the PMS price was adjusted from ₦87 per litre to ₦86.5 per litre from independent outlets and ₦86.0 per litre from NNPC outlets (a 0.2 and 0.7 US cent reduction from an initial level of USD 0.43); while the HHK price was adjusted from ₦50 to ₦83 (USD 0.25 to USD 0.41) per litre. The new levels were estimated to be around market prices for each fuel (Adugbo, 2016; Ohaeri & Adeyinka, 2016). The downward adjustment in the PMS price was possible due to the rapid fall in world oil prices since mid-2014; while the upward adjustment in the HHK price was necessary because it had always enjoyed a larger per litre subsidy than PMS, and as such still required an upward price adjustment, despite low world oil prices. The government announced that it was now making use of a “price modulation” policy, where it would adjust prices on a regular basis, either upward or downward, so that on average no subsidies would be paid—though at some specific periods of time, this would involve over-charging and collecting revenue or under-charging and paying a subsidy (Ohaeri & Adeyinka, 2016). As of mid-2016, one subsequent price adjustment has taken place for the price of PMS, increased to ₦145 (USD 0.72) per litre in May, reflecting a recovery in world oil prices (Gaffey, 2016). HHK prices were not adjusted at the same time, implying the return of an implicit subsidy on kerosene. It is not possible to calculate the exact level of subsidy, however, as there is no good transparent data source on how revenues from periods of over-charging compare with costs incurred by under-charging (Ohaeri & Adeyinka, 2016). In August, NNPC depots confirmed that the price of HHK had been increased to ₦150 (USD 0.46) per litre (Vanguard, 2016).

Despite these changes, the government still approves retail prices set by the Presidency and there are no clear indices that determine when adjustments should be made and to what level, as previously reported by CPPA (2012).

Price increases are usually resisted by citizens led by labour unions and civil society groups, often leading to compromises and reduction in the level of price increases.

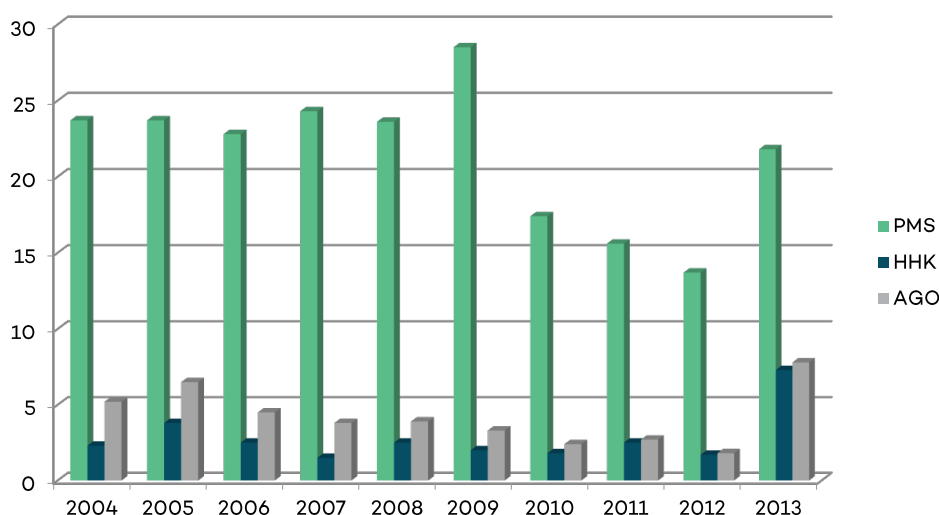


Figure 2. Average daily petroleum products distribution (million litres)⁶

Source: NNPC, 2013.

⁶ The NNPC statistical bulletin noted that in 2013, a total of 21,816.29 million litres of petroleum products was distributed nationally giving an average daily consumption of 43.55 million litres of PMS, 7.76 million litres of AGO, 7.30 million litres of HHK and 1.17 million litres of ATK.



Table 4. PPPRA product-pricing template for PMS (Based on Average Platts' Prices for May 21, 2015 and average exchange rate of the N197 to USD for May 21, 2015)

Item	Cost Element	USD/MT	Naira/Litre
1	C + F*	729.82	107.21
2	Trader's Margin	10	1.47
3	Lightering Expenses (SVH)	28.54	4.19
4	NPA	5.25	0.77
5	Financing (SVH)	11.93	1.75
6	Jetty Depot Thru' Put Charge	5.45	0.80
7	Storage Charge	20.42	3.00
	A. Landing Cost	811.41	119.20
Distribution Margins			
8	Retailers	31.31	4.60
9	Transporters	20.35	2.99
10	Dealers	11.91	1.75
11	Bridging Fund	39.82	5.85
12	Marine Transport Average (MTA)	1.02	0.15
13	Admin Charge	1.02	0.15
	B. Margins	105.44	15.49
Taxes			
14	Highway maintenance	0.00	0.00
15	Government Tax	0.00	0.00
16	Import Tax	0.00	0.00
17	Fuel Tax	0.00	0.00
	C. Taxes	0.00	0.00
	Total Cost/ Expected Open Market Price (A+B+C)	916.85	134.69
	Retail Price	592.22	87.00
	Subsidy Claim	324.63	47.69

* C+F price is Cost + Freight Offshore Nigeria; Conversion Rate (MT to litres): 1,341 Exchange Rate (N to USD) = 197

*** Effective Date of New Approved Pricing Template is January 19, 2015

Source: PPPRA website, n.d.



Table 5. PPPRA product-pricing template for HHK (Based on Average Platts' Prices for May 21, 2015 and average exchange rate of the N197 to USD for May 21, 2015)

Item	Cost Element	\$/MT	Naira/Litre
1	C + F*	664.07	106.19
2	Lightering Expenses (SVH)	32.24	4.31
3	NPA	5.25	0.84
4	Financing (SVH)	0.64	0.54
5	Jetty Depot Thru' Put Charge	5.00	0.80
6	Storage Charge	18.76	3.00
7	A. Landing Cost	733.44	117.28
Distribution Margins			
8	Retailers	28.77	4.60
9	Transporters	18.70	2.99
10	Dealers	10.94	1.75
11	Bridging Fund	46.98	5.85
12	Marine Transport Average (MTA)	1.20	0.15
13	Admin Charge	0.94	0.15
	B. Margins	96.87	15.49
Taxes			
14	Highway maintenance	0.00	0.00
15	Government Tax	0.00	0.00
16	Import Tax	0.00	0.00
17	Fuel Tax	0.00	0.00
	C. Taxes	0.00	0.00
	Total Cost/ Expected Open Market Price (A+B+C)	830.31	132.77
	Retail Price	312.69	50.00
	Subsidy Claim	417.62	82.77

* C+F price is Cost + Freight Offshore Nigeria; Conversion Rate (MT to litres): 1,341 Exchange Rate (N to USD): 197

*** Effective Date of New Approved Pricing Template is January 19, 2015 Source: PPPRA website, n.d.

The price difference between the EOMP and government-approved retail price does not remain constant: the EOMP follows fluctuations in international oil market prices, while the government price is sticky, and changes only when the government decides to “modulate” prices or a fiscal crisis compels it to attempt a removal of the subsidy.

As demonstrated in Section 2.1, Nigeria relies on a large share of imported refined petroleum products, especially PMS, HHK, AGO (Automotive Gas Oil, i.e., diesel), ATK (Aviation Turbine Kerosene, i.e., aviation fuel), and LPFO (Low Pour Fuel Oil, i.e., black oil for firing industrial boilers). This is because the local production of refined petroleum products is highly constrained by inefficient and mismanaged refineries that operate at less than half of installed capacity—and even if this were not the case, the full installed capacity of the existing four refineries is far below the local demand for refined petroleum products. For example, while daily demand for PMS is often estimated at 30-40 million litres,⁷ the total installed capacity of the local refineries is only 19 million litres per day. Thus, when world oil prices escalate, so does the cost of the subsidy.

⁷No reliable data are regularly published on PMS consumption in Nigeria. Over the past few years, official sources (NNPC, 2012; House of Representatives, 2012) typically state consumption figures of between 30-40 million liters per day, but independent commentators (Durojaiye, 2015) note the significant margin of uncertainty that remains.



Foreign exchange rates also impact the level of subsidy: when the Nigerian currency (the naira) is devalued, the landing cost in local currency soars, and hence the level of subsidy widens unless there is a corresponding increase in the pump price.

For each of the subsidized products, the total cost of subsidy can be calculated by taking the subsidy per litre and multiplying it by the quantity of product imported in a given year. Table 6 shows the EOMP of imported petroleum-based fuels in Nigeria and the associated level of subsidy on May 12, 2015. Following the 2016 price changes, the subsidy rates as of autumn 2016 are likely around zero for both PMS and HKK, though a positive subsidy rate is likely to have paid for HHK between May to August. Its exact scale is unknown, as detailed information on HHK is not available in the pricing template (Ohaeri & Adeyinka, 2016).

Table 6. Prices of petroleum-based fuels, May 12, 2015 (in naira)

Product	EOMP	Landing Cost	Ex-Deport Price	Retail Price (RP)	Subsidy (EOMP-RP)
PMS	131.39	115.9	77.66	87	44.39
AGO	134.27	124.93		134.27	
HHK	131.73	116.24	34.51	50	81.73
ATK	125.54	115.74		125.54	
LPFO	89.49	77.78		89.49	

Note: EOMP is Expected Open Market Price.

Source: PPPRA website, n.d.

As shown in Figure 3, Nigeria's fuel subsidy payments have been extremely high in recent years before the fall of world oil prices. These costs stood at ₦439 billion, ₦422 billion and ₦673 billion (USD 3.7 billion, USD 2.8 billion and USD 4.4 billion) in 2008, 2009 and 2010 respectively. In 2011, it jumped to ₦2.2 trillion (USD 14.0 billion) and came down to ₦832 billion and ₦852 billion (USD 5.2 billion and USD 5.3 billion) in 2012 and 2013 respectively. Over the six-year period, subsidy payment as a percentage of actual capital expenditure amounted to 109.8 per cent.

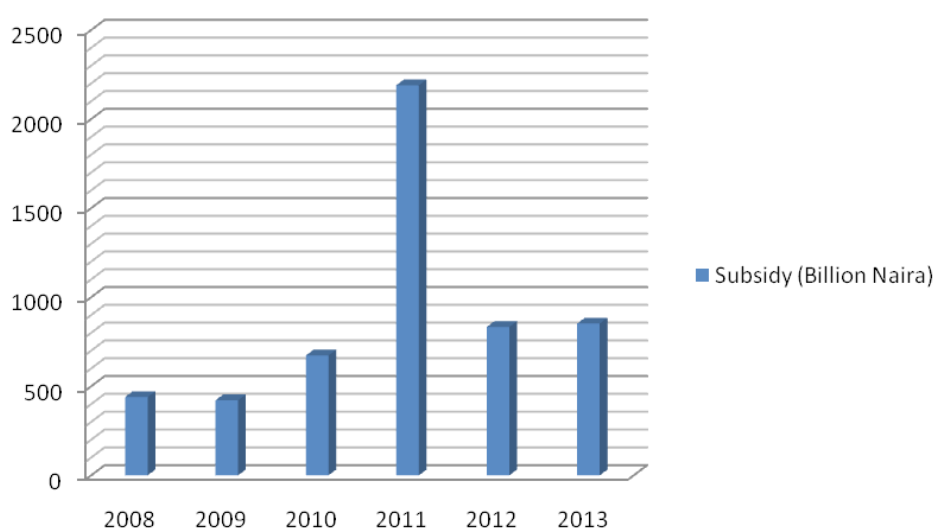


Figure 3. Trends in subsidy payments, 2008–2013

Note: Several recent inquiries into the subsidy regime notably by Ribadu (2012) and PwC (2015) have cast doubt on the authenticity of the huge subsidy payments especially in 2011, attributing them to disreputable financial dealings associated with the fuel subsidy payments.

Source: FGN, Appropriation Act, various years.



An analysis of the 2013 budget, for example, shows that allocation for fuel subsidy amounted to about 20 per cent of the entire budget. It was also 10 times more than the allocation for agriculture and rural development (₦81.4 billion), three times that of health (₦279.2 billion), and twice that of education (₦426.5 billion). The allocation to capital expenditure at ₦1.5 trillion was just a little above the fuel subsidy budget.

To drive home the reality of bloated subsidy levels, the amount spent on petrol subsidy alone in eight years is 16 per cent higher than the ₦4.69 trillion 2014 national budget, and also 11 per cent more than the 2013 budget of ₦4.93 trillion.

2.3 Political Economy of Fossil Fuel Subsidies in Nigeria

The pricing of petroleum products in Nigeria is laden with controversies due to a lack of transparency in the determination of the expected open market price (EOMP) of the products. It is difficult to ascertain the veracity of the claims by the PPPRA due to the opaque nature of the operations of the petroleum industry, especially the NNPC. But given the current templates of the PPPRA, a liberalized regime that allows fuel importers to sell at market-determined prices would free the PPPRA from the burden of setting prices.

The political economy of fuel subsidy removal in Nigeria involves a broad spectrum of stakeholders who have elaborated a number of arguments in support of—and in opposition to—the removal of fuel subsidies.⁸ The major reasons for subsidy removal include:

1. Massive foreign exchange demand fuelled by importation of petroleum products undermines macroeconomic stability because it exerts considerable pressure on the exchange rate and foreign reserves.
2. The opportunity costs of contracting debts to finance fuel importation are significant because burgeoning debt, particularly the domestic component, has reached an intolerable level in recent years.
3. Spending of a disproportionate share of the state budget on subsidies for petroleum diverts scarce resources away from projects and programs that are most needed for national development such as interventions in the health, education, infrastructure sectors. The fact that oil reserves are finite and falling makes it even more compelling to invest Nigeria's remaining oil resources into benefits for future generations.
4. The fuel subsidy regime has given rise to inefficiency, leakages, waste and widespread corruption which provide overwhelming evidence for fuel subsidy removal. Several reports point to the opaque, questionable and large payments to a variety of actors in the fuel marketing chain as a result of the subsidy scheme. For example, Ribadu (2012) demonstrated that the government paid ₦2.2 trillion (USD 14.0 billion) in subsidy payments in 2011 against a subsidy budget of ₦422 billion (USD 2.7 billion).⁹ The recent forensic audit of the NNPC also confirmed the unwholesome financial dealings associated with the fuel subsidy payments (PwC, 2015). Subsidized domestic prices are also an incentive for the cross-border smuggling of petroleum products.
5. Benefits of the existing subsidy regime are skewed in favour of the rich. The poor rarely obtain HHK at the official subsidized price, while a recent survey by NOI indicates that more than half of Nigerians (52 per cent) claim that they have not enjoyed the full benefit of subsidy on PMS.¹⁰

⁸ These rationales for and against fuel subsidy removal are drawn from NISER (2012).

⁹ See also Table 2 for trends in subsidy payments from 2006 to 2011.

¹⁰ NOI Polls Limited is a private sector opinion polls agency located at 4 Dep Street (Off Danube Street), Maitama, Abuja. www.noi-polls.com



6. Deregulation will transform Nigeria's oil sector and reverse a history of suboptimal performance by stimulating investment in local refining of petroleum and value-adding activities that promote linkage between the petroleum industry and other sectors of the economy. Experiences of successful deregulation in the communication and aviation sectors are a useful gauge of the potential benefits that could be achieved by oil industry deregulation.

The major reasons often expressed against the removal of fuel subsidy include:

1. Nigeria's present state as a net importer of petroleum products is anomalous. With increases in refining capacity, Nigeria could for a time meet its domestic fuel demand with domestic resources, obtained at the cost of production. Greater discipline is required, therefore, and not the removal or redesign of subsidies.
2. Massive corruption in the petroleum sector is responsible for astronomical subsidy payments. It is possible to address the corruption but to leave the subsidy itself in place. Without the corruption, the subsidy would be a good policy.
3. Removal of subsidies will escalate transportation costs, prices of food items and other essential commodities, thereby triggering inflation and deepening poverty.
4. There is a history of governments renegeing on earlier promises regarding compensation for subsidy cutbacks, which has led to a trust deficit. Citizens are not convinced that resources will be better allocated in their interests.

If the government wishes to continue to pursue subsidy reforms, it will need to show compassionate and courageous leadership that is transparent and people-focused. This is due to the fact that the reform of fuel subsidies often involves significant increases in fuel prices that could hurt consumers, including households and businesses. Because of these negative impacts, such reforms are often accompanied by measures to cushion the shock of the price increase or to provide compensatory benefits. Galvanizing and sustaining the trust of the people is critical for gaining necessary support from stakeholders that might otherwise doubt government claims and resist the increase in fuel prices.

A prudent, humble and accountable disposition is required to succeed in managing the transition to a market-determined pricing regime. Political leadership begins by involving critical stakeholders in monitoring performance and addressing the challenges of managing the transition to a liberalized market for fuel. Under such a regime, the appropriate price for petroleum products could differ across the country, reflecting the specific cost of distributing fuel to different locations. A 2015 survey by NOI (NOI, 2015) demonstrates that this was already in effect before the introduction of price modulation, with the price of PMS differentiated across the six geopolitical zones during the fuel scarcity of May 2015.¹¹ At this time, despite an official price of N87 (USD 0.44) per litre, NOI reported that 9 out of 10 Nigerians (90 per cent) bought PMS above this price and that the national average price paid for PMS was ₦114 (USD 0.57) per litre. Table 7 shows the average price of PMS and the proportion of road users that purchased PMS above the official price across the six geopolitical zones in May 2015.

¹¹ NOI Polls Limited is a private sector opinion polls agency located at 4 Dep Street (Off Danube Street), Maitama, Abuja.



Table 7. Average price of PMS across geopolitical zones in May 2015

Geopolitical zone	Average price of PMS (N/litre)	Proportion of road users that purchased PMS above N87/litre (per cent)
Northeast	129	97
North Central	116	88
North West	124	96
South East	105	96
South South	110	92
South West	101	72
National average	114	90

Source: Analysis of NOI, 2015.

Also related to the subsidy regime is the power play between the three tiers of government (federal, state and local) in the management and sharing of revenue accruing into the Federation Account and the Excess Crude Account (ECA) because the payment of subsidies by the federal government through the Petroleum Support Fund (PSF) implicitly draws on the Federation Account. On several occasions, when the Federation Account is drawn down, the ECA is tapped for the rescue. However, the ECA is one of the two accounts (dollar and naira) where the Nigerian government saves revenue earnings from the difference between budgeted benchmark crude oil price and the actual price at the international market in a given year. The ECA is designed to serve as a stabilization fund or fiscal buffer to shield the economy from crude oil price volatility in the international market. The depletion of the ECA account has recently caused controversy between the government of President Goodluck Jonathan and the 36 state governors arising from claims and counter-claims on who was responsible for drawing down the ECA between 2011 and 2015.

The opaque nature of the management of the oil and gas sector and the subsidy regime can also explain the increasing activities of vandals who sabotage the distribution of refined petroleum products, and aggravate the leakages in government revenue. The number of pipeline vandalism incidents surged from 895 in 2004 to 3,505 in 2013, peaking at 3,674 in 2006. Although the number of pipeline ruptures gradually declined from the peak of 76 incidents in 2004 for much of the later years; by 2013, it had climbed back to close to the 2004 level at 65 incidents (Figure 4). Similarly, pipeline product losses amounted to 396.9 metric tonnes in 2004 and 327.5 metric tonnes in 2013 corresponding to revenue losses of ₦19.6 billion and ₦38.8 billion (USD 0.1 billion and USD 0.2 billion), respectively (Figure 5).

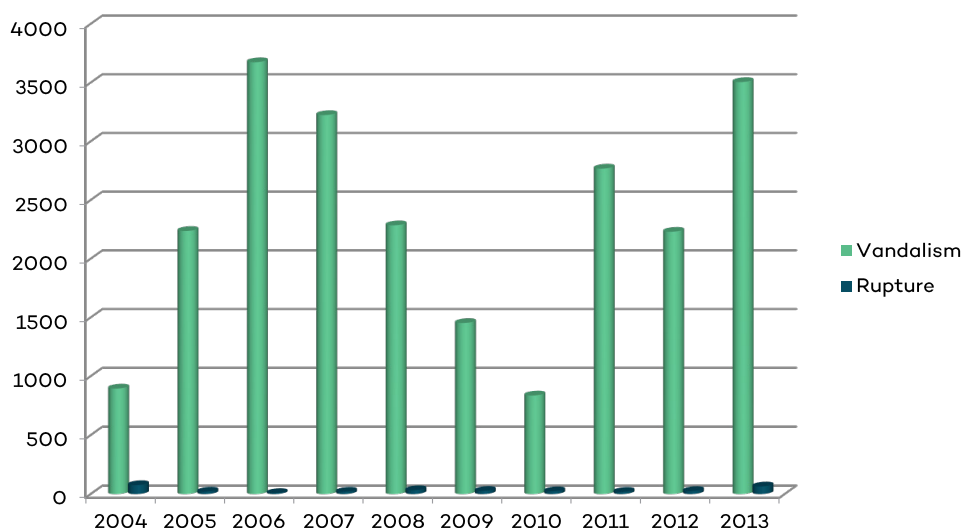


Figure 4. Number of pipeline vandalization incidents

Source: NNPC, 2013.

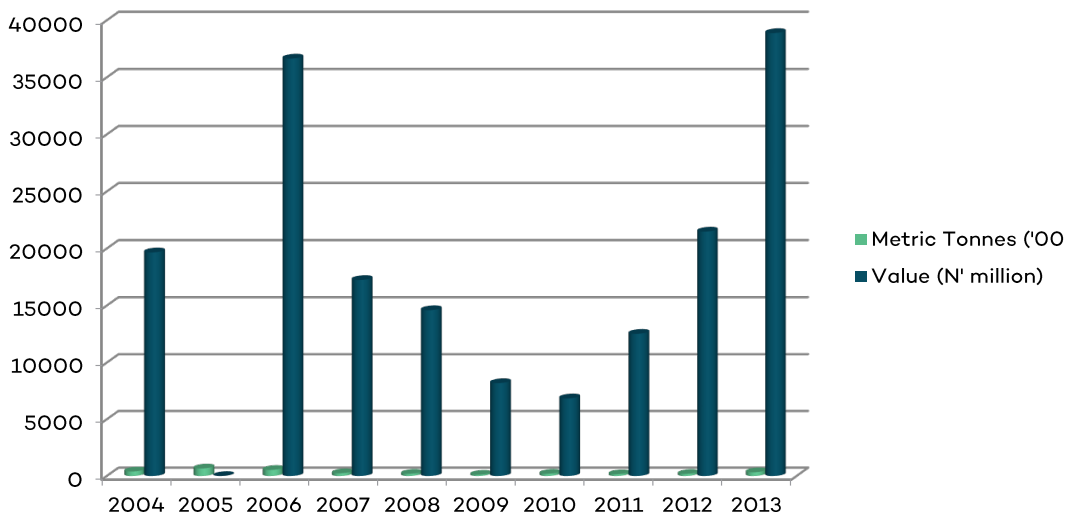


Figure 5. Pipeline product losses

Source: NNPC, 2013.



3.0 International Experiences of Social Protection for Fuel Subsidy Reform

As indicated in section one of this report, Nigeria has struggled with a large fuel subsidy burden, which has proved difficult to manage in recent years. This experience is not unique. Many countries have faced similar challenges in both reforming fuel subsidies and in attempting to ensure that the poor and vulnerable are not adversely affected by this process. Solutions designed to mitigate the impact of energy subsidy reform on low-income households will differ depending upon country circumstances, the type of subsidies in question, the level of development and many other factors.

3.1 Pathways of Impact of Fuel Subsidy Reform

International literature suggests that policy-makers should understand the impacts of fossil fuel subsidy reform on the poor as taking place through impact pathways, which can be direct or indirect.

Impact Pathways: Direct and indirect

Households can be affected by energy affordability in direct and indirect ways: directly, through the price of energy goods and services that they consume; and indirectly, through the embedded cost of energy in the goods and services that they consume.

Most countries that provide universally accessible fossil fuel subsidies do so in order to help households afford their direct energy costs, thereby reducing expenditure and improving energy access, as well as reducing the general cost of living through indirect impacts on the cost of non-energy goods and services. A comprehensive review of data on fossil fuel subsidies in 20 developing countries concluded that the bottom 40 per cent of households by income distribution received on average only 18 per cent of direct subsidy benefits and 19 per cent of indirect benefits (Arze del Granado, Coady, & Gillingham, 2012). This is because the poorest can afford only very small quantities of modern energy products, while the wealthy can afford to consume a large volume of energy, both directly and indirectly. The global average was closely reflected by the sub-set of African countries in the sample (Cameroon, Gabon, Central African Republic, Senegal, Ghana, Mali, Republic of Congo, Burkina Faso and Madagascar, ranging from 1999 to 2005), where on average only 19 per cent of direct benefits and 18 per cent of indirect benefits reached the bottom 40 per cent of households. By contrast, internationally the top 20 per cent of households received 48 per cent of direct benefits and 42 per cent of indirect benefits; and in African countries, 48 per cent of direct benefits and 44 per cent of indirect benefits.

Such data sets out two important principles: first, fossil fuel subsidies are highly inefficient welfare measures; but also, second, fossil fuel subsidies do result in some degree of direct and indirect benefits for low-income households, and such households will therefore be affected by reforms. In any country, the extent to which low-income households are affected by fossil fuel subsidy reform will depend on what fuels are being subsidized and how much they are used by the poorest.

- **Direct impacts:** Among poor households, the majority of direct spending on energy is typically to meet lighting, heating and cooking needs, and this typically involves a range of energy products, as households engage in “fuel stacking”: using a mixture of different fuels to meet their energy needs, and altering the proportions according to changing circumstances (IEA, 2006; Bacon, Bhattacharya, & Kojima 2010). Data on household expenditure can help isolate the extent to which reforms will affect the poorest. For example, reviews in South and Southeast Asia identified that, on average, petroleum products were part of the energy mix for 80 per cent of rural households and 74 per cent of urban households in the lowest two



income quintiles, accounting for around 2 to 3 per cent of total household expenditure among consuming households (Bacon et al., 2010).¹² This largely consisted of kerosene and liquefied petroleum gas (LPG) for lighting and cooking, as poor households cannot afford to own private vehicles or generators, and therefore do not typically purchase gasoline or diesel fuel.

- **Indirect impacts:** Indirect impacts on the poor are typically passed on through the inflationary impact of fuel subsidy reforms on basic goods (such as food) and services (such as transport). Again in South and Southeast Asia, Bacon et al. (2010) found that, on average, 49 per cent of rural households and 45 per cent of urban households in the lowest two income quintiles made use of transport services, accounting for around 2 to 3 per cent of total household expenditure among consuming households. Typically, subsidy reforms for diesel and electricity have the largest indirect impacts, due to the use of diesel in productive activities such as agriculture and fishing, freight and any enterprise using small-scale generators, and the use of electricity as an intermediate good for many enterprises and industries (Vagliasindi, 2012). Where subsidy reform affects the profitability of businesses or leads to a significant change in demand, indirect impacts may also include loss of employment.

Typically, the direct and indirect impacts of fuel subsidy reforms are calculated in terms of the increased cost of living for households post-reform. Employment impacts are often not modelled due to the difficulty of doing so accurately, but potential employment impacts should be considered. In addition, policy-makers should consider possible changes in energy consumption. If households switch to consuming more traditional biomass fuels, this may have knock-on negative impacts on welfare, particularly for women and children if they are collecting increased volumes of fuel and exposed to increased levels of smoke from biomass cooking stoves (Sovacool, 2013).

3.2 Policy Tools Used to Mitigate Impacts of Fuel Subsidy Reform on Low-Income Households

Generally, the suite of policy tools that can be used to mitigate the impact of reform upon low-income households is determined by how reform is implemented, the existence of social protection programs, how consumer price inflation is managed, and the design of the new pricing system.

- **How reform is implemented:** The approach, magnitude and frequency of reforms can increase or reduce the impact of price increases on the poor.
- **Social protection:** Impacts on the poor can be addressed through policies that supplement the incomes of low-income households by providing goods, services, cash or employment assistance.
- **How inflation is managed:** Inflation is the principal means by which indirect impacts are passed on to the poor, and macroeconomic management can thus be key to mitigating those impacts.
- **Design of the new pricing system:** This will influence the extent to which consumers are exposed to ongoing price volatility and vulnerable to structural price increases.

Table 8 presents the main features of the social protection programs and related pricing system that are applicable for mitigating the impact of fuel subsidy reform on poor households.

¹² The study reviewed data from 2005 household expenditure surveys from Bangladesh, Cambodia, India, Indonesia, Pakistan, Thailand and Vietnam. The precise proportions of energy products being consumed are likely to have changed since this time, given increasing world oil prices and efforts from a number of countries to encourage the use of LPG, but there is no reason to suppose that the broad proportions have changed significantly.


Table 8. Features of policy tools for mitigating the impact of fossil fuel subsidy reform on poor households

Policy	Policy description	Pros	Cons
Social protection	Provision of goods for low-income households: Many countries subsidized food, water or public transport to compensate for fuel subsidy reforms. LPG and kerosene subsidy reforms have in some cases been compensated by improved electricity access and lifeline tariffs.	Assists households if they consume goods in question. Simple to administrate if “inferior” goods are subsidized.	Paternalistic. Inefficient compared to alternative tools. May suffer from same problems as fossil fuel subsidies: poor targeting, distortions, high costs and illegal diversion. Will only assist households consuming these goods.
	Provision of essential services such as health and education for low-income households.	Assists households if they consume services in question. Simple to administrate if “inferior” services are subsidized. Will promote poverty reduction through benefits to service users.	Paternalistic. Limited ability to reduce immediate price shock. Will only reach household that access these services.
	Provision of cash assistance: Many countries have provided low-income households with some form of cash assistance to mitigate the impacts of fossil fuel subsidy reforms. Such assistance can be made “conditional” upon certain criteria, such school attendance or mothers taking young children to medical centres. Cash assistance may also take the form of a “basic income grant” that is delivered to all households, regardless of income levels.	Enables choice and is non-distorting. Delivers assistance to those most in need if targeting is strong. Evidence suggests that households spend cash on goods that promote their welfare. Conditional transfers will also promote development through linked criteria such as education and nutrition.	Requires significant administrative capacity to identify and update registry and a system to deliver cash benefits. Conditionality requires major investments in the supply of linked services and robust administration. Can have inflationary impacts. Cannot guarantee funds will be used for modern energy. Requires strong governance.
	Employment assistance: Various strategies have been used to assist households through policies related to salaries and employment, such as assistance schemes for the unemployed, a minimum wage, higher salaries for public sector wages or large public works programs.	Much depends on how easy it is to target policies to low-income households. Strong links with economic performance and general poverty reduction. Some policies (e.g., higher salaries in public sector) are easy to administer.	Adequate administrative capacity required for such policies. Risk of diversion of funds by corrupt officials and contractors. Benefits may not reach some (e.g., the elderly). Some policies (e.g., higher salaries in public sector) will not reach the poorest.
New pricing system	Price-smoothing mechanisms: A number of countries use mechanisms that limit day-to-day price volatility, such as varying taxes or making pricing contingent upon a predefined absolute or relative change in prices. In some, this is a permanent arrangement; in others, it is a transitional measure.	Households regularly cope with some measure of commodity price volatility, but smoothing may help in the short term as part of a transition to more volatile pricing.	Price-smoothing mechanisms involve under- or over-pricing fuel in the short term and risk the reintroduction of subsidies.
	Monitoring, enforcement and transparency: This includes systems to monitor prices across the country, collect consumer complaints, investigate and prosecute allegations of illegal activity and communicate with consumers.	Regardless of the pricing system adopted, any that regularly alters prices will require good standards of transparency, monitoring and enforcement to ensure fair prices.	New legislation and enforcement required. It is administratively complex and costly to monitor, enforce and communicate about pricing to a high standard.
	Linking pricing to crisis assistance measures: This includes creating formal linkages between energy prices and the social protection that is provided to protect the poor.	Linking assistance to sudden, large price hikes will assist households during crises, while removing pressure to reintroduce subsidies.	Good design is needed to ensure that government assistance is tied to appropriate triggers and set at an appropriate duration.

Sources: ADB, 2015; Kojima, 2013a, 2013b, Beaton et al., 2013, 2015; Laderchi 2014.



3.3 Energy Subsidy Reform and Social Protection in Sub-Saharan Africa: Selected experiences

Mozambique: Transport Vouchers

Mozambique is a low-income, resource-rich country with a small population and significantly lower GDP per capita than Nigeria, with little extraction of energy resources having taken place until recently. However, it suffers from many of the same problems of transparency and institutional capacity as Nigeria. Between 2010 and 2012, Mozambique undertook a process of fuel price reform in which all fuel prices were increased by around 70 per cent, except for diesel. To insulate poor consumers from these price increases, the government introduced a program targeting 1.8 million poor people in 11 provincial capitals that included bus passes for workers, students, and the elderly (Kojima, 2013). Urban transport vouchers were introduced in 2012, a program that has continued and that is now fully funded. One of the two key channels through which the poor are affected is higher costs for public transport and informal transport. Transport vouchers can therefore be an effective mechanism to minimize this channel of impact on households and workers.

Namibia: A portfolio approach

Namibia is a small, sparsely populated country, with one of the highest incomes per capita in sub-Saharan Africa (almost double that of Nigeria). Namibia also differs from Nigeria in the pervasiveness of good governance, with strong institutions and administrative capacity. Namibia undertook fuel price reform between 2003 and 2008, with the majority of adjustment taking place during the fuel price spike of 2007–08. In terms of mitigating measures, the government centrally managed price appreciation through a price-smoothing mechanism, in which prices were managed to avoid full pass-through in times of temporarily higher crude prices, but which allowed for effective cost-recovery over a quarterly timeframe. In response to higher fuel prices in 2007–08, the Namibian government also introduced a zero-rate VAT for staple foods, tax rebates for food importers and a subsidized food distribution scheme targeted at the rural poor. The government also continued to subsidize the transport of fuels to rural locations, so as to maintain affordability in poorer rural locales (IMF, 2013). Unlike other South African Customs Union neighbours, Namibia did not experience significant public unrest as a result of higher fuel prices; a fact that likely reflects the combination of price management, gradualism and effective complementary policy.

Niger: Subsidizing transport, enhancing social spending

Niger is one of the world's poorest countries, with a large and very poor rural population, and therefore different in many ways to Nigeria. The two countries are, however, neighbours, and communities in the north of Nigeria face many of the same challenges as those in Niger. Niger undertook fuel subsidy reform in 2011–12, following the accumulation of unsustainable subsidy liabilities by the government in previous years. Palliative complementary measures—costing significantly less than fuel subsidies themselves—were designed in partnership with the IMF. Stakeholder analysis found that the rural poor (a large proportion of Niger's population) were most likely to be affected by higher fuel prices as a result of higher public and informal transport costs. As such, a subsidy for transport operators was implemented to minimize the welfare impacts of pricing reform, especially given the importance of public and informal transport in allowing workers and students to navigate the large rural areas of central and northern Niger. At the same time, fuel subsidy reform allowed for a 19 per cent increase in social spending from 2011 to 2012, which was primarily used to boost education investment and the hiring of teachers (IMF, 2013).



Kenya: Enhancing rural electrification

Kenya has strong economic similarities with Nigeria, with similar GDP per-capita figures, a strong resource-based export economy and a relatively urbanized (albeit much smaller) population. Kenya exemplifies the ways in which savings from reform can be diverted into investment into energy access programs, potentially then in turn reducing dependence on traditionally subsidized fuels as the price of these rise (although this was not necessarily the case in Kenya). Where energy access remains a challenge, the savings from subsidy reform can be invested in rural electrification as well as the use of off-grid and clean lighting and cooking solutions (micro-solar and hydro, solar LEDs, biogas, etc.). Kenya undertook electricity tariff reform from 2005, beginning a process of transparently setting tariffs based on costs and robust market regulation, moving toward cost recovery. Between 2000 and 2009, electricity tariffs nearly tripled, with concomitant reductions in fiscal outlays to support the sector and enhancements in supply reliability. To address affordability concerns and social objectives stemming from reform, the Kenyan Government simultaneously invested heavily in enhancing electricity access, with a rural electrification program that increased national connections from 650,000 in 2003 to 2 million in 2013, the preservation of a lifeline tariff for consumers of 50 kWh or less per month and cross subsidies from urban to rural electricity users (IMF, 2013).

Uganda: A lifeline tariff

Like Kenya, Uganda has used a lifeline tariff to mitigate the impact of electricity tariff rebalancing that has taken place since 2006. While lifeline tariffs are clearly useful in protecting small, poor electricity consumers, it should be noted that they have parallels in fuel markets as well. An effective universal lifeline tariff (or subsidy ration) can be provided to transport fuel consumers (or linked to a particular vehicle), under which all consumers or vehicles are eligible to a certain capped amount of subsidized fuel (Kojima, 2013). Such a mechanism works to effectively enhance the progressiveness of subsidy distribution by capping the amount of fuel subsidy for which large, wealthy consumers (or industries) are eligible in a certain period. However, standard electricity metering makes this approach well-suited to electricity systems, while relatively sophisticated electronic monitoring systems are required to make such a system robust in the case of motor fuels and to undermine abuse and black-marketeering. Other fuels may be more conducive to this universal lifeline tariff model of subsidy distribution. LPG, for example, is sold in cylinders, making it relatively easier for India to cap the consumption of subsidized LPG cylinders per household per year (GSI, 2014). Key to the design of these systems is to cap fuel consumption at a level large enough to allow for basic lifeline consumption of fuels, but small enough to cut off excess subsidized consumption by larger and wealthier users.

3.4 Detailed Country Case Studies

3.4.1 Brazil

Fuel Subsidies

Brazil has a long history of subsidizing energy. While the objectives for keeping Brazil's fuel subsidies in place have changed over time, subsidy policies have primarily been implemented in order to promote Brazil's process of industrialization and achieve social and environmental targets (de Oliveira & Laan, 2010). Concerns around disparities in internal regional development have historically been a major political issue, and fuel subsidies were originally introduced to equalize national access to energy throughout the country. Thus, in the 1950s subsidies were provided to support the distribution of fuel and later expanded to include a range of levies and cross subsidies in an effort to make prices



uniform across regions (de Oliveira & Laan, 2010). With increasing international crude prices from the late-1990s, however, Brazil's fuel subsidies started to grow increasingly unsustainable.

In Brazil, fuel subsidies have primarily been provided for the consumption of diesel, gasoline, LPG and ethanol. Diesel has occasionally been sheltered from price increases due to its strategic importance to industry, while LPG has been subsidized in order to support vulnerable households. The government started to gradually increase prices for fossil fuels in the early 1990s, starting with those products predominantly used in industry, such as asphalt and lubricants. Price increases for gasoline, diesel and LPG followed later (IMF, 2013).

In 2002, Brazil deregulated its fuel prices by law. Until 2005, this effort led to gradually increasing fuel prices. From 2005 onwards, however, prices have in practice been fixed by the government. Thus, from 2005 to 2013 prices remained more or less flat despite significant fluctuations in world oil prices (Kojima, 2013). The total value of Brazil's subsidies is not fully transparent; nonetheless, estimates indicate that they have been quite significant. In the mid-1990s, the government paid USD 5.8 billion (0.8 per cent of 1995 GDP) to Petrobras, the national oil company, to compensate for its losses incurred by fixed domestic fuel prices (IMF, 2013). Moreover, Brazil has since 2005 continued to smooth fuel prices by adjusting tax levels on petroleum products. This has led to much revenue foregone by government and caused Petrobras to report significant losses on sales in recent years (Kojima, 2013).

Mechanisms for Mitigating the Impact of Fuel Subsidy Reform

In the wake of the 2002 reforms, the government introduced a number of measures to mitigate the impact of increasing fuel prices on low-income households. A predominant concern in this regard was around securing access to LPG for vulnerable households. LPG plays a pivotal part in Brazil's energy mix and is used by 98 per cent of all Brazilian households. Limiting access to LPG (via higher prices or other measures) had a range of negative impacts on poor households, including health impacts, since they substitute the consumption of LPG with cheaper fuelwood and construction debris (Lucon, Coelho, & Goldemberg, 2004). The following key mitigation measures have been used to mitigate these impacts:

- a) *LPG Voucher System*: In 2002, the Brazilian government introduced a voucher subsidy scheme to support poor households in the consumption of LPG (World Bank, 2014b). The voucher scheme directly targeted poor households on the basis of a proxy means test (World Bank, 2014b). Families making less than half the minimum wage were eligible to receive a voucher valued at USD 2.38 per month per family to support their consumption of LPG (GSI, 2010). The system relied on registers developed via other social welfare programs, including the *La Bolsa Escola*, in order to determine the eligibility of beneficiaries (World Health Organization [WHO], 2011). The LPG Voucher System was rolled into *La Bolsa Familia* in 2003.
- b) *La Bolsa Escola and La Bolsa Familia*: *La Bolsa Escola* was introduced in 2001 by then-President Lula as a conditional cash transfer program. *La Bolsa Escola* targeted families with children aged 6 to 15. Only families earning less than half the minimum wage were eligible for support and in order to receive benefits, households had to enrol their children in school (WHO, 2011). The primary objectives of *La Bolsa Escola* were to increase the level of education in poor households, reduce poverty in the short term and to reduce child labour (Linder, Hobbs, & de la Brière, 2007). In 2003, *La Bolsa Escola* was merged with the LPG Voucher System and two other social protection programs into *La Bolsa Familia* (IMF, 2013). *La Bolsa Familia* is now the largest conditional cash transfer system in the world, reaching more than 50 million people throughout Brazil, and is credited for contributing positively to a range of development goals (WHO, 2011).



- c) *Excise on Fuels*: The excise tax on fuels, CIDE (*Contribuição e Intervenção no Domínio Econômico*), was introduced in 2001 as a means to generate income that could in turn be used to subsidize the consumption of LPG for vulnerable households. The excise tax was also introduced to raise revenue for environmental protection projects, the construction of roads and subsidies for ethanol production (IMF, 2013). The levy has to some extent succeeded in improving revenue. However, in practice the levy has also been used as a means to smooth domestic fuel prices during times of rising international oil prices (Kojima, 2013). This has in turn resulted in large revenue foregone for the government.

Lessons Learned

- Brazil targets assistance to low-income households on the basis of a proxy means test.
- Brazil has successfully supported vulnerable households when LPG prices were rising by using existing social welfare mechanisms.
- In 2003, the government merged four social welfare programs into one nationwide mechanism, *La Bolsa Família*, supporting vulnerable households across the entire country.
- Brazil introduced an excise tax on fuels to finance the subsidizing of LPG to vulnerable households, as well as environmental protection projects. The tax has also been used to smooth fuel prices during times of increasing international oil prices.

3.4.2 Ghana

Fuel Subsidies

Ghana has achieved impressive economic growth of over 5 per cent on average per annum since 2006, allowing for a reduction of poverty from 50 per cent of the population in 1990 to 24 per cent in 2012, according to the World Bank. Despite significant progress, Ghana remains a relatively poor country, with an average income in 2013 of less than USD 5 per day, widespread rural poverty and high child poverty (approximately one in three children lives in poverty), especially in the north of the country (World Bank, 2015).

Ghana has long subsidized the consumption of fuel products, chiefly gasoline, diesel, LPG and kerosene. Since early 2001, numerous attempts have been made to either reduce these subsidies by increasing prices or to liberalize fuel markets partially or entirely. However, social pressure to maintain low energy prices has limited the success of these reform efforts (Vagliasindi, 2012). Most recently, beginning in 2009, the Ghanaian government began a process of price appreciation for all subsidized fuels, with prices for subsidized fuels more than doubling between mid-2009 and early 2013. In 2013, Ghana abolished fuel subsidies completely in order to curb a spiralling budget deficit, which reached 12 per cent of GDP by the end of 2012. Between January and September 2013, fuel prices increased between 15 and 50 per cent, with the largest increases in transport fuel (gasoline and diesel) prices. At the time of these reforms, fuel subsidies in Ghana cost USD 1.2 billion, more than half of Ghana's expenditure on education (Cooke et al., 2014).

In mid-2014, Ghana reintroduced fuel price caps as a result of strong pressures for fuel price appreciation that stemmed largely from a rapidly weakening domestic currency; spending on subsidizing fuels rose to USD 35 million per month between April and July 2014. Fuel prices were again raised and subsidies reduced in July 2014; however, significant subsidies on four fuels remain in place, costing close to USD 200 million in 2014 (Reuters, 2014).

The Ghanaian government indicated in June 2013 that it would seek to phase out all remaining fuel subsidies by September 2015 (GhanaWeb, 2015).



Mechanisms for Mitigating the Impact of Fuel Subsidy Reform

Ghana's fuel subsidies are highly regressive, even more so than in other countries. Prior to reform in 2013, approximately 85 per cent, 93 per cent and 97 per cent of LPG, gasoline and diesel subsidies respectively accrued to the wealthiest quintile of Ghanaian consumers (Cooke et al., 2014). Despite being highly regressive, and despite the fact that fuel use by poor consumers is low, the subsidy reform process that Ghana undertook between 2009 and 2013 still had potential impacts on the poor, whose ability to cope with higher prices (through conservation or substitution) is limited. Indeed, in modelling the impacts of the government's complete subsidy removal in 2013 (without complementary mitigation measures), UNICEF estimates that the process of subsidy removal had the largest negative impact on the welfare of households in the poorest quintile. According to these estimates, households in the poorest quintile experienced a decline of 2.1 per cent in real expenditure (compared with a 1.56 per cent decline for the 4th quintile, for example), leading to an increase in the national poverty rate of 1.5 per cent and an increase in the overall severity of poverty (Cooke et al., 2014).

In Ghana (as elsewhere), fuel subsidy reform and enhancements to the social safety net are intimately related in important ways. First, given their regressive nature, fuel subsidies are an ineffective means of achieving social protection and broad-based enhancements to the welfare of the poor. Second, the process of fuel subsidy reform itself requires complementary expansions of social welfare to mitigate the kind of welfare impacts envisaged in Ghana by UNICEF, described above. Finally, fuel subsidy reform can provide the resources and fiscal space for expansions and enhancements to national social protection systems. In this sense, the limitations of fuel subsidies as well as the process of fuel subsidy reform itself creates both the need and opportunity for expansions and enhancements to the social safety net.

In Ghana's recent reforms, one major mitigation measure—the *Livelihood Empowerment Against Poverty* (LEAP) program—has been used. In 2008 the Ghanaian government established LEAP to mitigate the impacts of fuel subsidy reforms on the poor. LEAP was designed to provide income support and health insurance to the very poor to provide short-term poverty relief and long-term human capital development. The program has expanded gradually since 2008 to become the central plank of Ghana's National Social Protection Strategy (Handa, et al., 2013). Under LEAP, beneficiaries are currently paid an average of USD 36 every two months, although in practice payments are made rather sporadically. In 2014, LEAP reached 77,000 households (Cooke et al., 2014).

LEAP is an excellent example of enhancements to social protection coinciding with—and being financed by—the process and proceeds of fuel subsidy reform. While fuel subsidy reform has taken place in a sporadic fashion for over a decade, the most major and systematic reforms took place in 2013. Following the elimination of fuel subsidies in 2013, the Ghanaian government took the opportunity to significantly scale up LEAP financing, with funding for the program more than tripling from USD 4 million in 2012 to USD 15 million in 2013. This also coincided with a tripling of the size of the cash benefit transferred to beneficiaries and an expansion of coverage by 50 per cent (Cooke et al., 2014).

According to evaluations completed by various organizations, LEAP has largely been a success, with demonstrated benefits for beneficiaries in terms of health indicators, school attendance nutrition and debt relief. LEAP is not only the largest social protection program in Ghana, it is also the most efficient, with 57 per cent of benefits reaching target populations—more than any other social program (UNICEF, 2014). LEAP is also cost-effective: Ghana's Ministry of Finance estimated in 2013 that less than 20 per cent of fuel subsidy savings from reform would be required to expand LEAP coverage to all households facing serious poverty (Modern Ghana, 2013).



The key criticism of LEAP, however, has focused on its modest scale. While the increase in its coverage to 77,000 was a significant achievement, realized only with funding from subsidy reform, this still represents a small share of vulnerable households nationally. UNICEF estimates that LEAP would have to reach at least 500,000 households to mitigate the negative welfare impacts of fuel subsidy reform on poor households (Cooke et al., 2014). This, in general, reflects a shortcoming of cash transfers as a social protection tool in countries with large, disconnected and disparate poor populations and limited administrative capacity and reach. Despite being cost-effective, delivering cash transfers to poor populations—from an administrative perspective—is difficult, complex and often unachievable, even for countries such as Ghana, which is known for relatively strong governance and high administrative capacity.

Lessons Learned

- Cash transfers can be a cost-effective means of delivering assistance to poor households to manage the impacts of fuel subsidy reform (and ultimately to enhance national social protection more broadly), as has been demonstrated in countries such as Indonesia. Cash transfers, such as Ghana's LEAP, have a strong record of enhancing key developmental indicators for beneficiaries.
- Effective coverage is critical to the success or failure of a cash transfer program. In practice, delivering cash transfers that effectively reach deserving poor populations is difficult, complex and in some countries unachievable. While highly beneficial for the households it reaches, LEAP fails to reach most of those in need. It may be best to consider complementary policies through a portfolio approach in such cases.

3.4.3 India

Fuel Subsidies

The Government of India (GoI) has for decades provided fuel consumption subsidies to meet a variety of economic and social objectives, including increasing rural energy access, supporting the purchasing power of the poor, stimulating economic activity and managing energy price volatility. However, India's fuel subsidies—mostly universal in nature—are poorly targeted, and therefore largely wasteful as social spending, with benefits mostly flowing to large users of energy, who tend to be wealthy households and businesses. For every six rupees the GoI spends on kerosene subsidies (the least regressive of India's fuel subsidies) only one rupee reaches the poorest 20 per cent of consumers (Clarke, 2014a). Recent research on the spatial distribution of subsidies in India demonstrates that the benefits of fuel subsidies are overwhelmingly enjoyed in richer and more urban states (Clarke, 2014b). The ineffectiveness of fuel spending is magnified by the sheer size of these fiscal outlays, which puts pressure on public finances and crowds out more effective development spending. In the last financial year, for example, the Indian government spent USD 7.8 billion subsidizing LPG—USD 1.4 billion more than the central budget allocation for primary education, and USD 2.5 billion more than the allocation to the flagship National Rural Employment Generation Scheme (NREGS) public employment program (Clarke, 2015).

Historically, the GoI has provided subsidies for the consumption of gasoline, diesel, kerosene and LPG. These subsidies were abolished in 2002, but were soon reintroduced informally when international oil prices began a process of structural appreciation from 2005. Since 2010, the GoI has undertaken a major process of fuel subsidy reform and restructuring, beginning with the deregulation of gasoline prices in this year. In 2014, diesel prices were liberalized after a long period of regular price increases. At the same time, the GoI has experimented with a number of different means of



distributing and targeting subsidies for LPG and kerosene consumption (Clarke, 2010). While there is much that can still be done to reform and optimize fuel subsidy systems in India, recent reforms provide interesting insights into the type of interventions that can minimize the impact of subsidy reform on the poor, those that have been less successful, and, indeed, whether there is a need for such interventions in the case of reforms to certain fuel prices.

Mechanisms for Mitigating the Impact of Fuel Subsidy Reform

According to the World Bank's definitions, India has almost a quarter of the world's population of people living in poverty (World Bank, n.d.). Enhancing energy access for India's poor has therefore been one of the most significant justifications for the maintenance of fuel subsidies over time. However, in the process of reform since 2010, the GoI has a mixed record of actively putting in place impact mitigation measures to reduce the burden of adjustment for the poor and other consumers.

The various policy design aspects intended to manage the impacts of reform processes for each subsidized fuel type are outlined below.

- a) **Diesel—gradual price increases:** Diesel is the single most consumed petroleum product in India, accounting for almost half (44 per cent) of total consumption by volume in FY 2012/13 (Clarke, 2015). Although differing significantly by region, at the national level it is principally used for transport, representing an estimated 70 per cent of total consumption (Clarke, 2015). For the poor, consumption of diesel is largely indirect, with diesel making up part of the cost components in food prices and a significant part of informal public transport prices. Faced with a growing fiscal bill for diesel subsidies and a widening trade deficit resulting largely from imports of liquid fuels, the GoI announced in January 2013 that India's state-owned fuel distributors would be free to raise diesel prices in monthly increments of INR 0.40–0.50 (USD 0.007–0.008) per month excluding taxes until subsidies were eliminated (Clarke, 2015b). Beginning with a large immediate diesel price increase of INR 5 (USD 0.08) per litre, with several notable exceptions, monthly price rises of approximately INR 0.50 then occurred as scheduled from January 2013 until August 2014; an impressive feat of policy persistence, despite a change in government in mid-2014 (Clarke, 2015b). In conjunction with a period of exchange rate stability and falling oil prices, this led to the effective cessation of diesel subsidies by September 2014. On October 18, 2014, the government announced the decision to implement formal decontrol of diesel prices with immediate effect (Clarke, 2015b; Clarke & Sharma, 2014).

The attainment of formal diesel price decontrol represents a significant policy achievement for successive Indian governments. The success of the reforms, involving a substantial initial price rise followed by incremental monthly increases (as recommended by several advisory committees), demonstrates the efficacy of phased price increases in limiting both economic disruption and immediate political opposition. The impact of the reforms on domestic inflation was tempered by the limited value of the retail price rises relative to total unit cost, and their distribution over a period of almost two years. Successive governments have not implemented direct mitigation measures to manage the impacts of reform. Instead, it was the gradualism of the reform itself that fulfilled this function, by allowing a phased transition in food and transport prices: minimizing one-off shocks, while allowing households and businesses to best respond to predictable increases in the price of diesel (and therefore food and transport). Taking place over close to two years, it also undermined the incentive and ability for food and transport vendors to price gouge, as is often experienced after large fuel price revisions.



- b) **Kerosene—the Public Distribution System:** The central plank in India’s social protection system is the Public Distribution System (PDS), which distributes rations of staple food items and kerosene to poor households designated Below the Poverty Line (BPL) or Above the Poverty Line (APL). APL households are still considered poor, while middle-class and wealthy households are not eligible for PDS rations. In the absence of electrification, the rural poor use kerosene for lighting (and to a lesser extent cooking). Kerosene prices have been set at INR 15 (USD 0.23) per litre for half a decade, currently representing a 70 per cent discount on market prices (Clarke, 2014).

The PDS system allows the GoI to target income assistance, rations and subsidies to the poor and very poor through a network of Fair Price Shops. The effectiveness of the PDS, however, depends on the ability to appropriately designate the socioeconomic status of households across India. In practice, there are significant errors of inclusion and exclusion in BPL and APL designation with, for example, around one third of fraudulent ration cards held by families in the richest 40 per cent of households. In addition, and perhaps most damagingly, estimates suggest that any between 33–50 per cent of subsidized kerosene is adulterated into diesel or used in commercial processes (Clarke, 2014).

The existence of an effective targeted rationing mechanism is a powerful tool for mitigating the impact of fuel subsidy reform on the poor, meaning prices can be liberalized while the poor continue to be provided with affordable fuel. In practice, however, effective dual pricing of this kind is difficult to achieve. Such a mechanism requires effective targeting of poor households, which, as in the case of India, is problematic to realize where systems and institutions are weak, oversight is poor and target populations are diffuse and difficult to reach. Dual pricing also creates a strong incentive for systematic divergence of subsidized product to unintended end uses, as has again been witnessed in India in the case of kerosene.

- c) **LPG—universal cash-assisted in-kind transfers:** To promote clean cooking and a transition away from biomass, India has historically and universally subsidized a limited (capped) number of LPG cylinders per household per year, with buyers receiving a direct subsidy on the purchase price of eligible cylinders. Since 2013, the GoI has moved slowly to a system of Direct Benefit Transfer (DBT), in which buyers pay the full price for LPG, then receive a cash transfer into bank accounts linked to a single specified LPG connection. The DBT for LPG (DBTL) has since become one of the largest cash transfer programs in the world. The shift to the DBTL system is intended to minimize fraudulent LPG connections and non-eligible consumption of subsidized LPG (by businesses for example) through stricter linkage between the purchase of LPG and the receipt of subsidy (in an approved bank account). According to the GoI, DBTL has worked effectively in this regard. Certain problems have, however, emerged (Clarke, 2015). First, DBTL requires high levels of financial inclusion, which is often a challenge to achieve among poor, rural and financially illiterate consumers. Without bank accounts and persistent management of personal funds, the poor will lose access to LPG subsidies. Second, schemes like DBTL do not themselves make it easier for the government to identify target consumers. Without a comprehensive and regularly updated registry of the poor, the government cannot confidently assume that the poor are being reached by cash transfer schemes; there will likely remain large errors of inclusion and exclusion.



Recently, the government has taken limited steps to use the DBTL system to restrict access of richer households to LPG subsidies (Choudhary, 2016). If made more ambitious, this would help to tackle many of the flaws of the PDS. With adequate identification of poor households, the DBTL could then allow for targeted distribution of subsidies, with a reduced risk of divergence and theft.

- d) **Gasoline—limited mitigation:** In 2010, the GoI unexpectedly liberalized gasoline prices, largely in order to contain a growing fiscal deficit. While the reform drew criticism from populist parts of the political establishment and from certain transport operators, it was largely supported by industry and caused little public outcry. Gasoline in India is used chiefly in private transport, meaning higher prices tend to impact more affluent car owners and businesses with large private car fleets. Public and informal transport, as well as food freight, is overwhelmingly powered by diesel in India. As such, gasoline price liberalization was predicted to have only limited impacts on the poor. Reflecting this, the GoI undertook gasoline reform rapidly and with little to no complementary mitigation, except a slight revision of excise tax rates.

Lessons Learned

- For transport fuels, direct mitigation interventions may not be necessary. In the case of gasoline, used very little by the poor either directly or indirectly, the GoI deemed impact mitigation measures to be unwarranted. For diesel subsidy reform, no mitigation measures were put in place; however, reform took place gradually and incrementally over close to two years—a process that minimized the indirect inflationary impacts of reform and allowed consumers and businesses to adjust consumption patterns over an extended period.
- Dual pricing and fuel subsidy targeting should only be attempted if certain administrative and institutional conditions are met. Dual pricing is likely to be inequitable and ineffective in conditions where targeting is not sophisticated (i.e., where there are significant errors of inclusion and exclusion relating to the beneficiaries of subsidized fuel). Dual pricing also creates a strong incentive for divergence and theft of subsidized fuel. Dual pricing should therefore only be attempted in cases in which (a) targeting mechanisms (and understanding of deserving beneficiaries) are robust and sophisticated, and (b) strong systems exist to undermine fuel divergence.
- Bank account cash transfers (or the equivalent) can be useful for reducing divergence of subsidized fuel. Electronic transfer means that consumers pay the full cost for fuel and then are reimbursed ex post, undermining the potential for divergence. However, implementing this form of subsidy distribution requires high levels of financial inclusions and may therefore be unsuitable in certain contexts. Vouchers distributed to the poor for the purchase of fuel can play a similar role by retaining the full cost of fuels in markets while providing a separate subsidy credit.

3.4.4 Indonesia

Fuel Subsidies

Indonesia subsidizes a range of fossil energy products and services: gasoline, diesel, LPG, kerosene, and electricity (largely generated by fossil fuels). The subsidies are expensive, costing over 2 per cent of GDP every year since 2010 and accounting for well over 10 per cent of all public expenditure (Lontoh, Beaton & Clarke, 2015). Table 9 presents the estimates of subsidy expenditure in Indonesia from 2010 to 2014.

**Table 9. Government estimates of subsidy expenditure in Indonesia (USD billion)**

	2010	2011	2012	2013	2014
Gasoline	4.2	9.1	11.2	9.6	8.6
Diesel	2.4	6.1	6.7	7.0	7.0
LPG	1.6	2.6	3.4	3.0	4.6
Kerosene	0.8	1.1	0.7	0.6	0.8
Electricity	5.9	10.6	9.9	9.6	8.8
Total	14.9	29.5	31.9	29.8	29.8
Total as % of GDP	2.1%	3.5%	3.6%	3.4%	-

Note. Government estimates are drawn from audited state budgets, with the exception of 2014, which derives from Revised State Budget 2014. The dollar value of Indonesian subsidies has been highly dependent on inflation during the last five years, so the IDR value of subsidies in each of the years has been converted according to the average midpoint inflation rate of the year in question: IDR 9,100 per USD in 2010; IDR 8,800 per USD in 2011; IDR 9,600 per USD in 2012; IDR 10,400 per USD in 2013; IDR 11,800 per USD in 2014. Exchange rate values taken from www.oanda.com. Data on Indonesian GDP taken from <http://data.worldbank.org/country/indonesia>. GDP data not available for 2014. LPG subsidy estimates include 3 kg-cylinder LPG only and do not take into account under-pricing of 12 kg-cylinder LPG, which the government does not recognize as “subsidized” in budget statements.

A number of efforts have been made over the past 15 years to reduce Indonesia’s subsidy expenditure. These major reforms in Indonesia’s fossil fuel subsidy regime are:

- The introduction of an automatic pricing system for gasoline and diesel in 2002, abolished in 2003.
- Large, ad hoc adjustments to various petroleum product prices in 2005, 2008, 2009, 2013 and 2014.
- The “zero-kero” program to convert users of subsidized kerosene to subsidized 3 kg-cylinder LPG, introduced in 2007 and still ongoing.
- Scheduled, gradual adjustments in electricity tariffs for various classes, ongoing at various points over the past 15 years.
- The introduction of a semi-automatic pricing system (still involving government decision making) for gasoline and diesel in December 2014, which incorporates lower levels of subsidies for gasoline supplied outside central Indonesia and for all diesel fuel. This latest reform has in theory eliminated most of Indonesia’s gasoline and diesel subsidies, but the sustainability of this will depend upon consistent application of the new pricing formula in months and years to come.

Mechanisms for Mitigating the Impact of Fuel Subsidy Reform

As of 2013, 28 million Indonesians (11 per cent of the population) were classified as below the poverty line (Perdana, 2014), defined in Indonesia as living on IDR 271,626 (~USD 20)¹³ per person per month. The gap between those below and above the poverty line is small. If the poverty line were doubled to USD 40 per person per day, 58 per cent of the population would be classified as “poor” (Perdana, 2014). Fossil fuel subsidies in Indonesia are typically perceived as a policy intended to support the poor, so impacts on Indonesia’s low-income households have been a key concern for the government during attempted reforms. In addition, the large number of “near-poor” households in Indonesia means that reforms have a significant chance of pushing households into poverty if mitigation measures are not provided.

¹³ Unless otherwise stated, all IDR/USD exchanges are made at a rate of IDR 13,300 per USD.



For this reason, a number of strategies have been pursued to mitigate the impacts of fossil fuel subsidies in Indonesia:

- a) **Sequencing of subsidy reforms:** The largest reforms in Indonesia have typically been for fuels that are less important to poor households: gasoline and diesel automotive fuels and electricity tariffs paid by industries and government institutions. When kerosene subsidies were removed, subsidies for 3 kg-cylinder LPG were introduced (see point c below), and no serious attempt has yet been made to reform LPG subsidies although the government is considering the introduction of targeted subsidies for LPG and electricity (Lontoh & Toft, 2016).
- b) **Packages of complementary policies to compensate the poor, including unconditional cash transfers:** Because of political opposition to reform, Indonesia has typically reformed subsidies through large, infrequent price increases. In order to help low-income households cope with this shock, Indonesia has usually combined its reforms with broad packages of policies intended to provide social protection to the vulnerable.¹⁴ The sophistication of these packages has grown over time, as Indonesia continues to invest in and improve its social protection systems. Strikingly, Indonesia's first large-scale unconditional cash transfer system—the Bantuan Langsung Tunai (BLT)—was created in only six months in order to help compensate for subsidy reforms. The registry for the BLT, created through a combination of interviews with village heads and proxy means testing, has been repeated and successively improved to form the basis of a unified registry that is now used by many of Indonesia's social protection programs. This includes a conditional cash transfer system—the Program Keluarga Harapan (PKH)—a key policy in the country's strategy for long-term poverty reduction. In this sense, Indonesia's reforms have helped to create systems that form its overall social protection capacity.

Table 10. Key policies used in Indonesia's fuel subsidy reform compensation packages

Policy name	Size, targeting and	Usage
Provision of goods for low-income households		
<i>Beras Miskin</i> —"rice for the poor," first introduced in a different form in 1998. Popularly known as "Raskin."	Has varied across its lifetime. Currently provides 15 kg of rice at 20–30 per cent of the market price to the bottom 25 per cent of the population (~15 million households). Rice is delivered to distribution points at the village level.	Following reforms in 2008 and 2013, savings funded extra provisions of Raskin. As with many subsidies, Raskin is known to be an inefficient policy, with problems related to inclusion, exclusion, delivery and governance.
Provision of essential services for low-income households		
<i>Jaminan Kesehatan Masyarakat</i> —public health insurance that covers most health care services, first introduced in a different form and name in 1998.	Has varied across its lifetime. Currently targets the bottom 30 per cent of the population (~18 million households, 76.4 million individuals).	Following reforms in 2005, savings were used to distribute health cards to 16 million households.
Provision of cash assistance for low-income households		
<i>Bantuan Siswa Miskin</i> —"assistance for poor students," introduced in 2008. Provides cash to students from low-income households in elementary, junior and high school, intended to cover non-tuition school expenses.	Has varied across its lifetime. Currently provides IDR 360,000–1,000,000 per year to students from all households in the bottom 25 per cent of the population (~15.4 million students). Cash is distributed via post offices.	In 2013, savings were used to expand coverage from 8 million to 15.4 million students. Some problems were experienced in the early years of the policy when payments were made to schools, which did not always use them as intended.

¹⁴ The principal exception to this rule is the introduction of the new pricing system for gasoline and diesel that was announced on December 31, 2014. Due to low international oil prices, this actually resulted in a price decrease, so no mitigation measures were provided. For exactly this reason it remains unclear whether the government will be able to continue increasing the domestic price of fuel without mitigation measures if international oil prices return to recent highs.



<p><i>Bantuan Langsung Tunai (BLT)</i>—“Cash Transfer Assistance” introduced in 2005; and <i>Bantuan Langsung Sementara Masyarakat (BLSM)</i>—“Temporary Cash Aid,” introduced in 2013. Provides temporary cash to poor and near-poor households to help cope with the short-term shock of subsidy reform.</p>	<p>In 2005, the BLT provided IDR 1,200,000 (~USD 120 at the time) over one year in quarterly payments to the bottom ~30 per cent; in 2008, it provided 9,000,000 (~USD 90) over nine months in quarterly payments to the bottom ~35 per cent; and in 2013, the BLSM provided IDR 150,000 (~USD 15) each month over four months to the bottom ~20 per cent (~15.5 million households). Recipients are identified via a card, and cash is distributed via post offices.</p>	<p>Although significant errors of exclusion and inclusion exist, both policies are considered to operate relatively effectively and efficiently. Domestically, the BLT was criticized for encouraging laziness and vice, but research shows that payments were mostly used to improve welfare. Governance concerns were expressed when 2009 payments were made just before national elections. The shift in name to BLSM was intended to emphasize the “temporary” nature of the assistance.</p>
<p><i>Program Keluarga Harapan</i>—“hopeful family program,” introduced in 2007. Cash transfer system, conditional on meeting health and educational requirements.</p>	<p>Has varied across its lifetime. Currently provides up to IDR 2,800,000 per year to 3.2 million households in the bottom 7–10 per cent that are eligible to meet conditional criteria.</p>	<p>In 2013, savings were used to permanently expand coverage from 2.4 to 3.2 million households and increase the maximum payment size. Further expansion is constrained by supply-side availability of schools and health facilities.</p>
Employment assistance		
<p>Infrastructure programs—Indonesia has twice announced infrastructure programs intended to help boost the economy and employment in rural areas.</p>	<p>Infrastructure programs have typically been one-off; as such, their design has varied in each case.</p>	<p>A 2013 program targeted villages that had poverty rates above 40–50 per cent, received aid under existing programs or were undergoing water crises. A 2005 program targeted 1,840 low-income and remote villages.</p>

Sources: Perdana, 2014; ADB, 2015; Beaton & Lontoh, 2010; Lontoh & Beaton, 2013; World Bank, 2012a.

- c) **Kerosene conversion program:** Since 2007, Indonesia has run a program to convert households from kerosene consumption to 3 kg-cylinder LPG consumption. The rationale for the program is that it costs less to subsidize LPG per unit of cooking energy, and it is a cleaner fuel (Beaton & Lontoh, 2010). As a result, subsidies for kerosene have declined significantly since this time and subsidies for 3 kg-cylinder LPG have grown. Some subsidized kerosene remains in distribution because the conversion program determined that several areas of Indonesia—such as the Maluku islands archipelago and West Papua—would not be targeted for LPG conversion “for technical reasons,” likely due to the difficulty of supplying remote areas (PT Pertamina [Persero] & the WLPGA, 2012). The policy has been successful in reducing kerosene subsidy expenditure but LPG subsidies—still universally accessible—have grown as a result, costing USD 4.8 billion in 2014 (see Table 9). Due to fiscal constraints and the regressive nature of this expenditure, the government is now considering options to target LPG subsidies to only the bottom 40 per cent of consumers (Lontoh & Toft, 2016).



Box 1. The National Team for Accelerating Poverty Reduction (TNP2K)

In the lead-up to the 2013 reforms, all of the social protection mechanisms in Indonesia (with the exception of the infrastructure program) were coordinated by the National Team for Accelerating Poverty Reduction (*Tim Nasional Percepatan Penanggulangan Kemiskinan*, or TNP2K).

TNP2K was created to operate as an “internal think tank,” responsible for conducting research, developing poverty reduction policies and programs, synergizing programs between different ministries and supervising and controlling implementation of programs and activities. TNP2K is chaired by the Vice President, co-chaired by the Coordinating Ministers for People’s Welfare and the Economy and includes as its members the Ministries of Home Affairs, Finance, Social Service, Health, National Education, Public Work, Cooperatives and Small and Medium-Sized Enterprises, Acceleration of Development-Backward Regions, the National Development Planning Agency, the Presidential Working Unit for the Supervision and Control of Development and the Central Statistics Agency. The working groups of TNP2K are staffed by a mixture of policy-makers and national academics who are experts in poverty reduction.

This administrative setup ensures that it is possible to have a well-coordinated overview of a basket of policies being used to mitigate the impacts of reform. It also allows for consistent and academically rigorous monitoring, evaluation and adjustment of policies.

Source: <http://www.tnp2k.go.id/en>

Lessons Learned

- Indonesia has successfully used a basket of social protection policies to compensate vulnerable households during energy subsidy reforms.
- Indonesia’s proxy means-tested targeting system was introduced to support an unconditional cash transfer in 2005 and has since been developed into a unified registry of poor households used by many social protection policies.
- Indonesia has used savings to invest in its capacity to provide social protection. This has served to enable future subsidy reforms at the same time as generally improving the government’s ability to assist the poor across its social assistance spending.
- Indonesia has a strong technical and administrative body that is able to coordinate a basket of policy tools that were previously embedded within a range of different ministries.

3.4.5 Iran

Fuel Subsidies

Iran has provided large-scale subsidies for many commodities since 1980, including petroleum products, basic foods, medical supplies, water, power and sewage (Nikou, 2010).

Petroleum product subsidies did not produce a direct fiscal burden, as they were funded by selling domestically produced resources at or near the cost of production. The opportunity cost, however, was large, and was seen as increasingly unsustainable in the light of high population growth and severe economic sanctions in response to Iran’s nuclear power program (Nikou, 2010).

**Table 11. IEA estimates of subsidy expenditure in Iran (USD billion)**

	2011	2012	2013
Oil products	9.1	11.2	9.6
Natural gas	6.1	6.7	7.0
Coal	2.6	3.4	3.0
Electricity	18.7	15.9	15.3
Total	36.5	15.9	15.3
Total as % of GDP	6.9%	7.4%	9.5%

Source: IEA, 2014. GDP calculations are authors', based on <http://data.worldbank.org/>

Major reforms in Iran's fossil fuel subsidies are as follows:

- In 2010, the parliament approved a plan to phase out subsidies (including non-energy subsidies) by 2015. Subsidies for wheat, rice, cooking oil, milk, sugar, postal services and airline and railway services were reduced as well (Nikou, 2010).
- In 2012, a second set of reforms was scheduled but postponed, due to difficult economic conditions. This included high inflation, which eroded the subsidy reductions created by previous price adjustments.
- In April 2014, the government increased petrol prices by 75 per cent (Wilson, 2014), electricity bills by around 24 per cent and water bills by 20 per cent (Paivar, 2014). It also announced the abolition of its tiered pricing system (Feroohar & Nasser, 2015).
- In May 2015, the government increased gasoline prices by 43 per cent and diesel by 20 per cent (Nasser & Kalantari, 2015; Kuwait Times, 2015).

Mechanisms for Mitigating the Impact of Fuel Subsidy Reform

Due to the important role that subsidies have historically played in Iran's approach to social protection, its reform plan is explicitly linked to the development of alternative measures to support households and businesses. The following key mitigation measures have been used:

- Quota allowances and targeting of subsidies:** In 2010, the price of gasoline was split into three tiers (subsidized, semi-subsidized and free market), with the second two tiers seeing price increases of 4- to 7-fold; while diesel prices were increased 9- to 18-fold. Consumers continued to receive a subsidized price for the first 60 litres of gasoline that they purchased every week. For natural gas and electricity, complex multi-tier tariff structures were introduced. The exact size of increases is not easily reported due to the complexity of the structures, but, at the upper end, large household consumers were charged rates for energy slightly above international market prices while smaller household consumers received increasingly subsidized rates (Guillaume, Zyteck, & Farzin, 2011; Salehi-Isfahani, 2014a). The introduction of quota allowances and multi-tariff structures for motor fuels, natural gas and electricity was intended to help minimize the impact of price increases on vulnerable and small users (Guillaume et al., 2011). This type of pricing system is not common for motor vehicle fuels because of the ease with which subsidized fuel can be diverted and adulterated and may have been considered in Iran because it had an existing system of tiered fuel prices (Beaton & Clarke, 2016). The tiered pricing system for motor fuels has since been disbanded, making this a short-term measure.



- b) **Cash transfers:** Initially, the government intended to provide a cash transfer only to low-income households, but this plan was abandoned because no registry existed that would allow it to accurately identify eligible households (Nikou, 2010; Salehi-Isfahani, 2014a; Hassanzadeh, 2012). Instead, a cash transfer was created from which any individual could benefit, regardless of wealth. The government invited people to register for the transfer, but asked wealthy individuals not to apply (Guillaume et al, 2011). In the first four months of the program, about 82 per cent of the population registered and received transfers; this soon increased to about 95 per cent of the population (Salehi-Isfahani, 2014a). The transfer was initially set at IRR 445,000 per person per month, equal to ~USD 45 in 2010 or 15 per cent of the average income of a median family income for family of four in 2011 (Demirkol, Blotevogel, Zytek, Zimand, & Liu, 2014). Eligible households were asked to set up bank accounts in order to receive the transfers electronically. Transfers were made several months before reform came into effect, but frozen until prices were increased. In advance of implementation, major upgrades had to be made to banking infrastructure and payment systems, and both policy and process were well publicized (Guillaume et al, 2011). No duration was set upon the lifetime of the cash transfer, making it a long-term measure.

The cash transfer succeeded in reducing the social impacts of reforms, actually resulting in reduced poverty and inequality. At the same time, Iran experienced significant problems. The cash transfer policy cost more than the subsidy reform saved, largely because it was made available to almost the entire population. In 2014, Vice-President Eshagh Jahangiri stated that while the country had saved USD 33 billion in subsidies over the past three years, it had paid over USD 43 billion in cash transfers (Paivar, 2014). In 2015, the program is reported to face a shortfall of USD 3.5 billion (Foroohar & Nasser, 2015). This has prevented the government from carrying out its non-social-welfare assistance policies, which included programs on energy efficiency, public transport, enterprises and infrastructure. In addition, Iran experienced very high inflation following reform. This eroded some of the welfare gains (the real value of the transfer is now said to be USD 16 per month (Foroohar & Nasser, 2015), about one third of its original value). This led to the partial reintroduction of subsidies and, as demonstrated by Table 12, the new fixed prices for energy goods and services are now worth less than when they were established. It is uncertain to what extent subsidy reforms were responsible for this high inflation, as Iran was also subject to severe economic sanctions related to its nuclear program. The cash transfers however played a contributory role, as they increased net public expenditure and stimulated consumer demand, increasing the money supply.

In recent years, the government has tried to reduce the number of individuals subscribed, with a campaign of appeals by influential clerics and sports stars convincing 2.4 million people to opt out in 2014 (Foroohar & Nasser, 2015). Going forward, it is likely that the next strategy will be to continue efforts to reduce the total number of beneficiaries of the cash transfer, with an estimated 20 million Iranians needed to be removed (Foroohar & Nasser, 2015). The government has stated otherwise it will be necessary to cut its budget for infrastructure, where it has plans for major road and rail projects, and two nuclear power stations. It believes that this expenditure is more important in meeting social welfare needs, as it will lead to job creation, essential for the 24 per cent of youth reported to be in unemployment (Foroohar & Nasser, 2015).

**Table 12. Impact of inflation on the value of cash transfers and new price levels for gasoline**

	2009	2010	2011	2012	2013	2014	2015
Inflation rate		10.1%	20.6%	27.4%	39.3%	17.2%	-
IRR/USD ¹	9,512	9,724	10,278	11,800	17,487	25,514	27,339
USD value of IRR 455,000 cash transfer	USD 47.8	USD 46.8	USD 44.3	USD 38.6	USD 26.0	USD 17.8	USD 16.6
USD value of IRR 10,000 gasoline	USD 1.05	USD 1.03	USD 0.97	USD 0.85	USD 0.57	USD 0.39	USD 0.37

¹ Average exchange rates are bid rates over calendar year at +/-2% interbank rate. For 2015, exchange rates are average over the first five months of 2015.
Source: World Bank data on inflation www.data.worldbank.org; exchange rates from www.oanda.com

- c) **Price controls:** In the days following the first price increase in 2010, controls were imposed on the prices of most products, and Iranian companies were pressured to reduce the price of some goods to offset the price increases (Guillaume et al., 2011). Where this created problems for some sectors, the government adapted its approach: for example, when truckers struggled to cope with price controls, the government allowed for limited price increases and increased their quota allocation of low-cost diesel (Guillaume et al., 2011). It is hard to determine the extent to which this measure was short- or longer-term, due to a lack of detail in reporting on these controls and the nature of the Iranian economy, which involves significant government intervention. A number of price caps are, however, reported to have been removed by February 2012 (Demirkol et al., 2014).
- d) **Food handouts:** In 2013, food handouts were introduced. Citizens were eligible for a basket of free goods that had to be picked up from distribution centres. The value of the basket was around USD 30 in exchange rates at the time, around half the value of the cash transfer for a family of four. The basket of goods was made available to nine million individuals. Initially, the policy targeted workers earning the minimum wage (around USD 350 per month), but also included groups such as seminary students and reporters (Salehi-Isfahani, 2014b). It is not clear if the policy is ongoing, but reports indicate that it is likely to continue until at least the end of the government's current term (AL-Monitor, 2014). The policy has been criticized as largely unsuccessful. In part, this was due to poor organization. Recipients had to stand in long queues for many hours (Wilson, 2014) and the situation at distribution centres was described as "chaos," with many households finding that they were ineligible only after having waited in line for hours (Salehi-Isfahani, 2014b). There are also limitations to food handouts as a compensation measure. They still incur financial costs and are based on the assumption that the government is better positioned to determine people's needs than they are themselves (Salehi-Isfahani, 2014b).

Box 2. The Subsidy Reform Organization

Iran's 2010 Subsidy Reform Law created a new government body to manage the savings from subsidy reforms, called the Targeted Subsidies Organization (TSO). The TSO was responsible for managing the mitigation measures related to reform, including the cash transfer system. The law states that its board should include the Ministers of Welfare and Social Security, Economic Affairs and Finance, Commerce, Roads and Transportation, Agricultural Jihad, Industries and Mines, Petroleum, Energy, and Head of the Management and Planning Organization (MPO) (Guillaume, Zyteck, & Farzin, 2011). It is required to submit its budget and semi-annual reports to parliament, as well as being subject to audit by the Supreme Audit Court. Accounts and reports related to the TSO have not been made public, contributing to speculation about the effectiveness of the government's policies (Demirkol, Blotevogel, Zyteck, Zimand, & Liu, 2014).



Lessons Learned

- If they are not well designed, social protection policies can be as expensive and inefficient as fossil fuel subsidies.
- If reform is simply a matter of adjusting prices upward, but keeping a “fixed” price system, then the durability of reforms will be highly vulnerable to inflation and exchange rate fluctuations. Long-lasting reform is likely to require the introduction of at least some kind of automatic pricing system. Without it, governments may fail to release fiscal pressure, funding both social assistance programs and fuel subsidies instead of only one or the other.
- There is no easy solution to choosing the right pace and size of price adjustments. In Iran, it was judged that price adjustments would be so unpopular that “shock therapy” was the best treatment. Unfortunately, this resulted in a high inflationary impact which, in combination with other strains on the economy, proved to reverse many of the gains achieved.

3.4.6 Implications for Subsidy-Related Social Protection in Nigeria

The five case studies highlight country experiences, both positive and negative, in the implementation of various mitigation measures and social assistance packages designed to insulate low-income households from the potential negative impacts of energy subsidy reform. The lessons learned from these case studies are considered useful for the development of mitigation measures designed for a similar purpose in Nigeria, adapted as necessary to the Nigerian context. Table 13 provides a summary of the measures used by each of the five countries.

Table 13. Summary of compensation measures applied by case study countries

Country	Universal cash transfer	Targeted cash transfer	Quotas, targeted fuel subsidies and/ or dual pricing	Vouchers or transfers linked to fuel purchase	Subsidies or vouchers linked to other goods or services (food, education, etc.)	Gradual fuel price increase
Brazil		x		x		
Ghana		x			x	
India			x	x		x
Indonesia		x			x	
Iran	x		x		x	

Ten key lessons for the design, implementation and delivery of measures to mitigate the impact of fuel subsidy reform on low-income households (and to enhance and deepen social protection systems) can be drawn from the foregoing analysis of various country experiences.

1. **No solution is perfect.** International experience in mitigating the impact of energy subsidy reform on the poor demonstrates that this is a difficult process, especially in contexts where institutions are developing and administrative capacity is a challenge. Governments should seek to implement solutions that are relatively simple to administer and that build as much as possible on existing social assistance mechanisms. Monitoring and evaluation of interventions will be crucial to ensure that programs are progressively improved over time.
2. **A portfolio approach may be necessary.** In practice, few countries attempt to mitigate the impacts of reform through one single measure, mechanism or intervention. Typically, policy-makers should consider how mitigation and the coverage of mitigation can be improved through a basket of measures. For example, Namibia managed to successfully reform fuel subsidies in the mid-2000s while protecting the poor by implementing a range of anti-poverty programs and subsidy reform simultaneously, while Indonesia has repeatedly compensated



households with packages of measures. A portfolio approach may involve a trade-off of higher costs versus a reduced risk of errors of exclusion. For example, health care benefits will reach individuals who might not benefit from education allowances. And infrastructure programs will create jobs for those without health issues or children. There will also be a trade-off between the number of measures used and the cost and administrative ease of implementation, with a large number of interventions likely to enhance inclusion but increase costs and reduce chances of successful implementation.

3. **The simpler the intervention, the more likely it is to succeed.** Interventions to mitigate the impacts on the poor of energy subsidy reform are likely to be more successful when they are simple to implement and deliver. Complex programs that structurally reform social protection systems may have the potential for transformative poverty alleviation, but these usually take several years to properly implement and perfect. Implementing interventions that seek to mitigate the impacts of higher energy prices requires the knowledge of what these impacts are likely to be. Often, once these impacts are identified, there are simple (albeit imperfect) “least-worst” solutions available to policy-makers. A good example of a simple, successful approach to mitigation has been transport vouchers in Mozambique. Recognizing that the impact of subsidy reform was likely to manifest itself through higher public and informal transport prices, the Mozambique government widely distributed transport discount vouchers to reduce the impact of the reform process on consumers. Exceptions do, however, exist—Indonesia, for example, is considered to have successfully developed an unconditional cash transfer targeting roughly the bottom 30 per cent in 2005.
4. **Choose what is working now.** Most countries have existing social protection mechanisms that have been improved and expanded over time to be increasingly effective. In keeping with the “simpler the better principle,” policy-makers should utilize existing social expenditure and social protection “infrastructure” (other subsidy systems, health and education allocations etc.) to deliver additional impact mitigation interventions to support subsidy reform, especially in contexts where institutions are developing and/or reform is rushed. In cases of national fuel subsidy reform, both Indonesia and Egypt, for example, expanded aspects of their respective established, effective and well-targeted food subsidy systems, thereby reducing cost-of-living pressures for consumers in reform periods.
5. **Cash transfers are unlikely to be the sole answer to the mitigation question.** Cash transfers can sometimes be a cost-effective means of delivering assistance to poor households to manage the impacts of fuel subsidy reform (and ultimately to enhance national social protection more broadly), as has been demonstrated in countries such as Indonesia. Cash transfers, such as Ghana’s LEAP, have a strong record of enhancing key developmental indicators for beneficiaries. However, effective coverage is key to the success or failure of a cash transfer program, and, in practice, achieving sufficient coverage is a challenge. Delivering cash transfers that effectively reach deserving poor populations is difficult, complex and often unachievable in countries with large and disparate poor populations and limited administrative and targeting capacity. LEAP, for example, though highly beneficial for the households it reaches fails to reach most of those in need. When using cash transfers, it may be best to consider complementary policies through a portfolio approach, as undertaken in Indonesia and Iran.



6. **An integrated reform plan.** The social impacts of reform will be determined by more than just social protection and assistance mechanisms. The Indian experience in diesel reform demonstrates that well-designed price reform trajectories can themselves be an effective form of impact mitigation, while also being less costly and less difficult to deliver than specific social protection mechanisms. Policy-makers should ensure that price reform processes themselves (including the sequencing of reform of different fuels)—as well as complementary social protection interventions—are well designed, with an in-depth understanding of the likely impacts of different reform scenarios. Communications around the need for fuel subsidy reform will also be crucial in building support for this process.
7. **The cure can be worse than the disease.** If not well designed, social assistance policies can be as expensive and inefficient as fossil fuel subsidies. Ambitious and complex social protection policies to be implemented in times of reform should undergo intensive planning, design and impact analysis processes, and should not be rushed in implementation. Without these preconditions, complementary policies are likely to have unintended consequences. In Iran, for example, an untargeted cash transfer proved as costly as subsidies, while a food handout policy ran into serious difficulties around implementation.
8. **Invest in the future.** Most countries with large subsidies do not have developed social assistance capacity, a function which subsidies have been partially performing. This means that reform is not only an opportunity to invest savings in improving capacity, but that without these investments it is likely that subsidies may return. The cost of improving social assistance systems can be large but it is a necessary investment for improved public expenditure in the long-term. In Indonesia, the cost of developing a unified registry of the poor was estimated to be just over 1 per cent of the combined budget of the three main social assistance programs in 2010 (World Bank, 2012b). Registries also involve ongoing costs, as they must be regularly updated as people move in and out of poverty. A share of savings should be invested in improving such capacity. This will not assist in managing the short-term shock of higher prices, but it will assist in managing the longer-term increases in the cost of living, as well as help contribute to poverty reduction goals across the board.
9. **Plug into the big picture when it comes to poverty eradication.** Reform and investment in social assistance capacity should be aligned with and strongly support existing developmental strategy. Programs intended to help households cope with the short-term shock of fuel price reform ought to be time-bound. Other programs, however, may help households cope with the medium- and long-term higher costs of living. These policies ought to play a coherent role in a country's long-term strategy to eradicate poverty and as such are in most cases likely to be provided indefinitely, until they too are improved or replaced with more effective and efficient alternatives. In Brazil, a conditional education-focused cash transfer program and an LPG voucher program were eventually rolled into a large, strategic cash transfer program, designed to target poverty more broadly.
10. **High-level political leadership and coordination is needed.** Designing and implementing measures that mitigate the impact of energy subsidy reform on the poor is a difficult process. In order for this process to be successful it will require attention and priority at upper levels of government to ensure that implementation is as effective as possible. At the same time, senior cabinet ministers and officials should undertake a process of internal governmental organization to ensure strong, fit-for-purpose, whole-of-government coordination of the implementation, monitoring and evaluation of social protection programs supporting fuel subsidy reform.



4.0 Review of Compensation Mechanisms Adopted by Nigerian Governments

This section presents an overview of the state of poverty and its relationship with energy use in Nigeria, a historical review of the compensation mechanisms adopted by Nigerian governments to cushion the effects of previous fuel price hikes and a review of mechanisms employed as instruments of social protection to help the poor and vulnerable segments of the Nigerian population.¹⁵

4.1 Poverty Status and Energy Use

The number of people in poverty in Nigeria has increased over the years. As shown in Table 14, the population of Nigerians in poverty stood at 17.1 million in 1980, rising to 34.7 million in 1985 and to 39.2 million in 1992. This increased to 67.1 million in 1996, before falling to 68.7 million in 2004. The population in poverty has since increased, with 112.5 million people estimated to be poor in 2010. Correspondingly, poverty incidence increased from 27.2 per cent in 1980 to 65.6 per cent in 1996 and 69 per cent in 2010.

Table 14. Relative Poverty Incidence, 1980–2010

Year	Poverty Incidence (%)	Estimated Population (Million)	Population in Poverty (Million)
1980	26.3	65	17.1
1985	46.3	75	34.7
1992	42.8	91.5	39.2
1996	65.6	102.3	67.1
2004	54.4	126.3	68.7
2010	69.0	163	112.5

Source: National Bureau of Statistics, 2012, drawing on data from the Harmonized Nigeria Living Standard Survey 2009/10.

The proportion of extremely poor people in the population has also generally been rising. Specifically, the proportion of the extremely poor rose progressively from 6 per cent in 1980 through 13.9 per cent in 1992 to 38.7 per cent in 2010. The proportion of moderately poor in the country fluctuated significantly from 21 per cent in 1980, peaked at 36.2 per cent in 1996, before settling at 30.3 per cent in 2010 (Table 15)

Table 15. Relative Poverty (Non-poor, Moderately poor, Extremely Poor - %) 1980–2010

Year	Non-Poor	Moderately Poor	Extremely Poor
1980	72.8	21.0	6.2
1985	53.7	34.2	12.1
1992	57.3	28.9	13.9
1996	34.4	36.3	29.3
2004	43.3	32.4	22.0
2010	31.0	30.3	38.7

Source: National Bureau of Statistics, 2012.

¹⁵ The majority of the findings presented in this section derive from a series of Key Informant Interviews (KIIs) conducted by the research team in 2015. In instances where information is not specifically referenced, the reader should infer that the source is a KII with a relevant national policy-maker.



The configuration of poverty by geopolitical zones shows that poverty is most prevalent in the North West zone. Indeed, the proportion of absolute poor in the zone is 70 per cent, compared to 69 per cent in the North East, 59.5 per cent in the North Central, 58.7 per cent in the south-east and 49.8 per cent in the south-west. The North West also has the highest proportion of the relatively poor in the population at 77.7 per cent compared to 63.8 per cent in the South South and 59.1 per cent in the South West (Table 16).

Table 16. Incidence of Poverty by Zones Using Different Poverty Measures (%)

Zone	Food Poor	Absolute Poor	Relative Poor	Dollar Per Day
North Central	38.6	59.5	67.5	59.7
North East	51.5	69	76.3	69.1
North West	51.8	70	77.7	70.4
South East	41	58.7	67	59.2
South South	35.5	55.9	63.8	56.1
South West	25.4	49.8	59.1	50.1

Source: National Bureau of Statistics, 2012.

Energy use has increased consistently since the 1970s. Energy use (in kilotonne of oil equivalent, or ktoe) reached 36,071 ktoe in 1970, rising steadily to 118,325 ktoe in 2010. Specifically, energy use averaged 43,478 ktoe in the 1970s, 62,427 ktoe in the 1980s, 80,982 ktoe in the 1990s and 106,175 ktoe in the 2000s. Meanwhile, per capita energy use energy use (kg of oil equivalent) represents a flatter curve, standing at 667.0 in the 1970s and rising to 731.9 in the 1980s. In the 1990s, energy use per capita rose marginally to 736.3 and increased slightly to 738.3 in the 2000s.

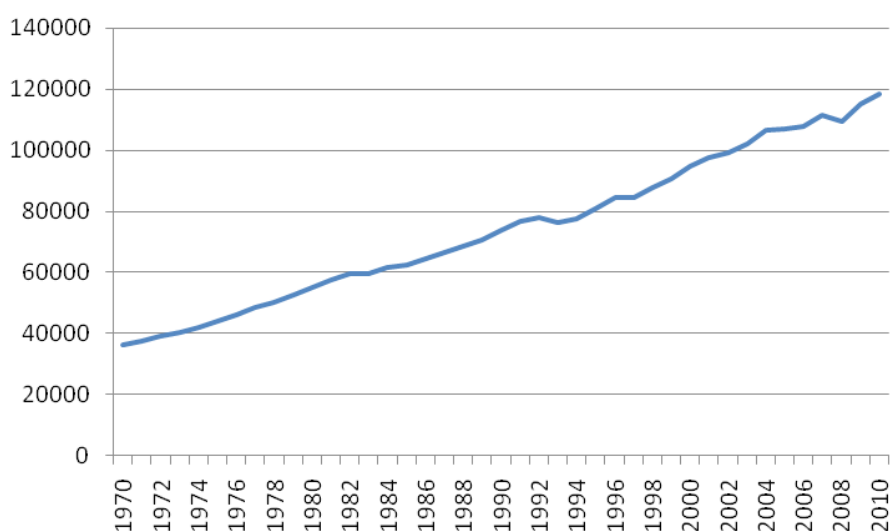


Figure 6. Energy use (kt of oil equivalent)

Source: World Development Indicators, 2013.

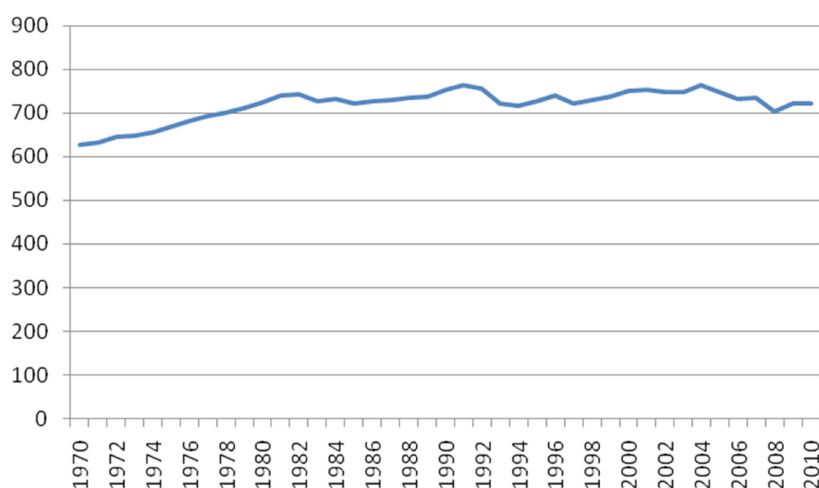


Figure 7. Energy use (kg of oil equivalent per capita)

Source: World Bank, 2014a.

4.2 Compensation Mechanisms to Cushion the Impact of Hikes in Fuel Prices

4.2.1 Pre-SURE P Compensation Mechanisms

Prior to the establishment of the Subsidy Reinvestment and Empowerment Program (SURE-P) in February 2012, Nigerian governments had established a pattern of response to protests instigated by hikes in fuel prices. However, not all the hikes in fuel prices drew resistance from the populace. Protests were often championed and led by civil societies, especially the labour unions.

The customary response to these protests is a rollout of new programs and projects by the government or strengthening of existing programs aimed at cushioning the effects of these price hikes on the vulnerable segments of the population. With the exception of the Buhari military regime (1984–85), every Nigerian government since the first episode of fuel subsidy adjustment in 1977 has implemented a partial removal of the fuel subsidy.

According to Ibrahim and Unom (2011), the first hike in fuel price was in October 1978, and since then there have been a number of adjustments in the prices of petroleum products. Often price increases have matched periods of devaluation of the naira. In some instances, the net outcome of reform has been an increase in the nominal value of fuel but a decrease in its USD value. Several reports analyzing the fuel subsidy regime in Nigeria (e.g., Ibrahim & Unom, 2011; Central Bank of Nigeria [CBN], 2011; NISER, 2012; Oghojafor, Anyim, & Ekwoaba, 2014; PwC, 2015) have demonstrated that every attempt to deregulate the price of petroleum products has largely been unsuccessful but often accompanied by various compensation schemes to mitigate the effects of the price hikes.

Public reaction to changes in the price of premium motor spirit (PMS) or petrol has been the most dramatic even though the increase in the price of other petroleum products (e.g., HHK, ATK, AGO, LPFO) also has far-reaching effects on households and businesses. It is, however, noteworthy that partial deregulation of the petroleum downstream industry has effectively liberalized the prices of aviation turbine oil (i.e., aviation fuel or kerosene), automotive gas oil (i.e., diesel) and low pour fuel oil. The price of HHK remains regulated, but an upward adjustment in the price of PMS is not always accompanied by hike in price of HHK.



In this historical review, we focus on the compensation mechanisms that governments have used to cushion the effects of increases in the price of PMS due to the real or perceived inflationary effects of the increases.

*Obasanjo Regime, 1976 to 1979*¹⁶

The first hike in the price of PMS occurred in 1978, when the military regime of General Obasanjo raised the price of PMS from 8.8 kobo to 15.3 kobo (USD 0.14 to USD 0.24) per litre (Ibrahim & Unom, 2011), largely to improve the fiscal position of government. As a result, inflation climbed from 15 per cent in 1977 to 22 per cent in 1978 (World Bank, 2014a).¹⁷

Besides being a military government that may not tolerate opposition, the Obasanjo government had adopted a “low-profile” policy since it came into power, to curtail extravagance and conspicuous consumption by public servants (see Metz, 1991). This was possibly a major factor in the lack of significant protests against the 1978 fuel price hike. The increase in prices was part of the austerity measures introduced by the government as a result of fiscal imbalance arising from the populist posture of the Murtala Muhammed–Obasanjo regime.¹⁸

Under Obasanjo’s government, education was free or heavily subsidized (Oni, 2008). Its flagship program, Operation Feed the Nation (OFN), launched in 1976, was aimed at boosting food production to reduce food imports and promote the rural economy (Iwuchukwu & Igbokwe, 2012). The OFN was expected to help improve agricultural productivity of subsistence farmers and thereby increase their income and the livelihood conditions of the rural population. Thus, the first hike in fuel price was a response to the need to improve revenue to match growing expenditure demands of government programs that were perceived to have significant social welfare effects.

Shagari Government, 1979 to 1983

The civilian government of Alhaji Shehu Shagari maintained the fuel price regime put in place by the Obasanjo government up to April 1982. This was possible because of the surge in the international price of crude oil in the early 1980s in the wake of the 1979 Iranian Revolution and the subsequent Iran–Iraq war. The civilian government relaxed the austerity measures and the low-profile policy of the Obasanjo regime. However, by 1982 the price of crude oil had plunged, and revenue could not cover the massive expenditure outlay of the civilian government (Olowu, Laleye & Ayeni, 1982). The fuel subsidy regime therefore became a significant target for cuts in expenditure, and the price of PMS was raised from 15.3 kobo to 20 kobo (USD 0.23 to USD 0.30) per litre (Ibrahim & Unom, 2011).

As was the case with the Obasanjo government, the fuel price increase was part of a series of austerity measures aimed at achieving fiscal balance and steering the economy away from a looming depression (Olowu, Laleye & Ayeni, 1982). There was no mass protest to resist the increase in fuel price, possibly because of the political power contest as 1983 general elections were imminent. The opposition hoped to capitalize on the fuel subsidy debacle as evidence of gross mismanagement of the economy to unseat the incumbent government. President Shagari won the elections controversially, but allegations of economic mismanagement, corruption and electoral malpractice provided grounds for the overthrow of the civilian government three months after inauguration for another term, by Major General Muhammadu Buhari on December 31, 1983 (Othman, 1984).

¹⁶ All currency conversions for the dates before 2000 in this review of Nigeria’s history of subsidizing fossil fuel derive from average annual official exchange rates taken from the World Development Indicators: <http://data.worldbank.org/indicator/PA.NUS.FCRF>

¹⁷ Inflation - consumer prices (annual %) in Nigeria. Retrieved from <http://www.tradingeconomics.com/nigeria/inflation-consumer-prices-annual-percent-wb-data.html>

¹⁸ Obasanjo’s military government was an extension of the government of Murtala Muhammed who overthrew General Yakubu Gowon in July 1975 and was assassinated in an aborted coup on February 13, 1976.



Babangida Regime, 1985–1993

General Ibrahim Babangida assumed power through a coup in August 1985. The previous Buhari military government had kept the PMS price at 20 kobo per litre while maintaining an austerity policy marked by limiting public expenditure while tackling corruption and indiscipline. The crude oil price, which had been about USD 30 per barrel, crashed to about USD 12 per barrel in 1986 and remained below USD 20 per barrel for the rest of the 1980s (Okogu, 2014). As a result of the fiscal crisis that ensued, the pump price of PMS was raised to 39.5 kobo (USD 0.23) per litre on March 31, 1986 and to 42 kobo (USD 0.09) per litre on April 10, 1988. In January 1989, the price of PMS was increased to 60 kobo per litre (USD 0.08) for private vehicles, and by December of that year all vehicles were required to pay 60 kobo per litre for PMS (Ibrahim & Unom, 2011). In March 1990, the Babangida regime raised the price of PMS to 70 kobo (USD 0.09) per litre (Ibrahim & Unom, 2011).

To a large extent the hike in the price of PMS during the Babangida regime did not precipitate civil unrest, likely because of the government's ongoing and systematic efforts to disempower civil society and the fact that increases were implemented in modest instalments (Ibrahim & Unom, 2011). The Babangida government made no claims to subsidy reinvestment, but nevertheless was mindful of the welfare concerns associated with the escalating fuel prices. The government introduced programs to cushion the impacts of the increases in fuel prices on the poor and vulnerable groups, while simultaneously implementing programs to improve the livelihood conditions of the poor and vulnerable in the society. According to Ibrahim & Unom (2011), these programs included the Directorate for Food, Roads and Rural Infrastructure (DFRRI) in 1986; and the formation of the National Directorate of Employment (NDE) in 1986; and building 23 NNPC depots to improve the availability of petroleum products.

Shonekan, Abacha and Abubakar Administrations, 1993–1999

The Interim National Government (ING) of Chief Ernest Shonekan attempted a complete deregulation of the price of petroleum products by increasing the price of PMS from 70 kobo to N5 (USD 0.03 to USD 0.23) per litre (i.e., over a 700 per cent increase) on November 8, 1993 (Ibrahim & Unom, 2011). This led to the first organized protest against subsidy removal in Nigeria.

The protest was spearheaded by the Petroleum and Natural Gas Senior Staff Association of Nigeria (PENGASSAN) and the Nigeria Union of Petroleum and Natural Gas Workers (NUPENG), and provided a convenient alibi for the military intervention that aborted the nascent third republic on November 17, 1993 (Ibrahim & Unom, 2011). To calm the protests after forcefully taking power from the ING, General Sani Abacha reduced the pump price to N3.25 (USD 0.15) per litre on November 22, 1993, but later raised the price by over four times to N15 (USD 0.68) per litre on October 2, 1994 (Ibrahim & Unom, 2011). Following more mass protests, the price of PMS was revised downward to N11 (USD 0.50) per litre on October 4, 1994 (Ibrahim & Unom, 2011).

As a mechanism for compensating the poor and vulnerable for the adverse effects of the higher cost of PMS, the Abacha government established a Petroleum Special Trust Fund (PTF) headed by General Muhammadu Buhari (Ibrahim & Unom, 2011). The PTF was responsible for managing the extra revenue accruing from the fuel price increase. The fund was dedicated to the development of physical infrastructure and social services aimed at improving the livelihood conditions of the people. In addition, the Abacha regime instituted a Federal Urban Mass Transit Agency with a target to provide some 1,000 mass transit vehicles at concessionary loan terms to transporters that would in turn charge affordable fares to commuters (Ibrahim & Unom, 2011).



The regime of General Abdulsalami Abubakar further increased the price of PMS to N25 (USD 1.14) per litre on December 20, 1998; and just like previous increases, this sparked mass protests across the country (Ibrahim & Unom, 2011). The protests did not last long partly because the government was seen as a transitional one. Nonetheless, the protests forced a reduction in price to N20 (USD 0.22) per litre on January 6, 1999 (Ibrahim & Unom, 2011). The Abubakar administration maintained the palliative measures instituted by the Abacha regime for the duration it held power.

The Fourth Republic Administrations, 1999 to date

Under the civilian administration of Olusegun Obasanjo (1999-2007), the price of PMS was increased to N30 (USD 0.29) per litre in 2000 (Ibrahim & Unom, 2011). As a result of the mass protests that followed the increase, which lasted for about two weeks, the price was reduced to N22 (USD 0.21) per litre (Ibrahim & Unom, 2011). The price of PMS was subsequently increased under the Obasanjo government to N26 (USD 0.21) per litre in 2002, N40 (USD 0.30) per litre in 2003, and N70 (USD 0.55) per litre in 2007 (Ibrahim & Unom, 2011). There was no protest that accompanied the increase in 2002, perhaps because the price increase was modest, but the hikes in 2003 and 2007 generated mass protests by civil society and organized labour unions (Ibrahim & Unom, 2011).

The Obasanjo administration recognized the importance of introducing compensation mechanisms to lessen the effects of the price hike. For example, Ibrahim and Unom (2011) reported that in response to the 2003 protests, Obasanjo negotiated an agreement with the Nigeria Labour Congress (NLC) and its allies through which the federal government would give N100 million to each state, which every state was expected to match with a further N200 million to provide loans to reputable public transport companies. In addition, the Obasanjo government sustained the National Directorate of Employment's programs and introduced the National Poverty Eradication Programs (NAPEP) within the ambit of a broad program of poverty reduction under the National Economic Empowerment and Development Strategy (NEEDS).

Although the hike in the price of PMS in 2003 was not reduced, that of 2007 was reviewed downward to N65 (USD 0.51) per litre by the Yar'Adua administration in June 2007 (Ibrahim & Unom, 2011). The government did not introduce any new program of compensation for the hike in the price of fuel but continued with the poverty alleviation programs of the Obasanjo government.

On January 1, 2012, the price of PMS was raised by the government of President Goodluck Jonathan to N145 (USD 0.91) per litre in a bid to totally deregulate the prices of petroleum products (Aramide et al., 2012). This was met by unprecedented opposition by civil society groups and labour unions that galvanized in an "Occupy Nigeria" movement in Nigeria's major cities. The protest lasted for several days and was akin to the then-prevalent Arab Spring protests. The response to the fuel price hike was apparently threatening to the government, and hence it revised the price downward to N97 (USD 0.61) per litre (Aramide et al, 2012).

To cushion the effects of this latest price increase, the Subsidy Reinvestment and Empowerment Program (SURE-P) was launched in February 2012. The objective of SURE-P is to provide support to various strata of the population through a range of programs, including the financing of infrastructure and the creation of job opportunities for unemployed youths. By January 2015, the Jonathan administration reduced the price of PMS downward to N87 (USD 0.43) per litre following the slump in the international price of crude oil, which significantly reduced the landing cost of imported refined petroleum products. While the reason for the price reduction was valid, the fiscal viability of this action was dubious because the fall in the price of crude had considerably threatened revenue projections and the financing of capital projects.



4.2.2 SURE-P Mechanisms

Prior to January 2012, various Nigerian governments had raised prices of petroleum products either to increase revenue or directly to reduce the subsidy on petroleum products and thus free up resources for investment in critical development projects and programs. The attempted total removal of the fuel subsidy in January 2012 was courageous, though resisted by a broad spectrum of the Nigerian population. It was the first time that a total removal of the fuel subsidy had been attempted since the inception of the democratic government in 1999, although the government backtracked and partially reversed the initial increases. To cushion the effects of the new fuel prices on the poor and vulnerable, the Subsidy Reinvestment and Empowerment Program (SURE-P) was launched.

Objectives of SURE-P

The broad objective of SURE-P was to invest the savings accruing from the partial removal of fuel subsidy in specific areas of the economy to cushion the effects of the price hike. The areas where the subsidy savings have been invested include the execution of road projects across the country, notably the Lagos-Ibadan Expressway, Abuja-Lokoja Road, Kano-Maduguri road and the Benin-Ore/Sagamu Expressway. SURE-P intervention areas also include rehabilitation of rail networks from Lagos to Kano and Port Harcourt to Maiduguri and the modernization of Abuja-Kaduna rail and the East-West route. The second Niger Bridge and Oweto Bridge, under the auspices of the Federal Ministry of Niger Delta and Federal Ministry of Works, also benefited from SURE-P interventions. In 2014, some FCT projects including the Abuja light rail and satellite town development were integrated into the SURE-P arrangement.

Certain social programs—including those for maternal and child health and primary health care and rehabilitation work on some existing health care and public works infrastructure—received counterpart funding from SURE-P. Community services, women and youth empowerment programs were also supported by SURE-P. Other programs that received SURE-P support include the Graduate Internship Scheme, managed by the Ministry of Finance, and the technical and vocational education and training programs supervised by the Federal Ministry of Labour and Productivity. Box 3 presents an overview of programs that were partially or wholly funded by the SURE-P mechanism between 2012 and 2014.

Box 3. Overview of SURE-P

SURE-P outlined a variety of social safety net programs to mitigate the impact of the partial removal of fuel subsidy in 2012 on the poor. The programs included:

1. **Urban mass transit:** Increasing mass transit availability by facilitating the procurement of diesel vehicles (subsidized loans, reduced import tariffs, etc.) to established operators. In the first step of this program, the government intended to import 1,600 buses within few months of the inception of SURE-P.
2. **Maternal and child health services:** Expanding the conditional cash transfer program for pregnant women in rural areas and upgrading facilities at clinics.
3. **Graduate Internship Scheme:** Providing opportunities for graduates of tertiary educational institutions to be engaged by private and public sector agencies where their skills can be upgraded through mentoring aimed at making them better suited for the labour market.
4. **Public work:** Providing temporary employment to youth and women from the poorest populations in environmental projects and maintaining education and health facilities.
5. **Vocational training:** Establishing vocational training centres across the country to help tackle the problem of youth unemployment.

Source: Fieldwork data, 2015; Oghojafor, Anyim & Ekwoaba, 2014; Nwosu & Ugwuverua, 2014.



Targets Groups/Beneficiaries/Costs

The target groups included unemployed graduates, pregnant women and nursing mothers, and indeed society as a whole because of the focus areas that affect large sections of the population, in particular construction and maintenance of roads.

Mode of Operation

SURE-P is financed as an off-the-budget activity, and referred to in official parlance as an “Intervention Fund.” A Committee of tested and trusted people (about 21 statesmen) was set up to oversee the implementation of the programs and projects. The SURE-P Board is headed by a Chairman and has a Secretary. There are also representatives from Southern and Northern Nigeria. The Board also includes the Ministers of Finance and Petroleum Resources and representatives of labour unions. The Department for International Development (DFID) was represented at the formation stage. By conception, the SURE-P administrators funded certain specific responsibilities or projects of the ministries, departments and agencies (MDAs) with perceived benefits to the masses, although the actual execution was handled by the MDAs. The secretariat of SURE-P supervised and assessed projects for quality. The decision on which projects to support was determined by the Ministry of Finance, a decision usually made at the design stage of the projects.

Effectiveness of the Policy

The selection of programs and projects for SURE-P by the Ministry of Finance is perceived by some stakeholders to have limited the effectiveness of SURE-P. However, the infrastructure projects, especially roads, provide evidence of some accomplishments of the program.

Stakeholders and Power Relationships

Politics associated with the SURE-P programs grossly constrained its effectiveness and limited the impact of the intervention programs.

4.3 Other Social Protection Programs

The research team also conducted a review of non-subsidy specific social protection programs in Nigeria that could be considered for inclusion in any possible future package of measures to compensate for the impacts of fuel subsidy reform.

4.3.1 Free Basic Education

Objective(s) of the program

The objective of the Universal Basic Education (UBE) program launched in 1999 was to improve access to primary and basic education in Nigeria. The program entitles children to free and compulsory education for the first nine years of education, i.e., from Primary One to Primary Six and Junior Secondary School 1 to 3. Thus, the UBE scheme is designed to ensure that children from poor homes have the benefits of basic education and also to draw out-of-school children into the basic education system.

Target Groups, Beneficiaries and Costs

The policy is targeted at children younger than 15 years. In recent years, preschool (nursery school) children have been integrated into the UBE policy to expose them to some form of education to facilitate their assimilation into the regular school system.



Mode of Operation

The intervention modality of the Universal Basic Education Commission (UBEC) is through funding of infrastructure development, provision of teaching materials and equipment and training of teachers. The operational mechanism requires states to provide counterpart funds for UBEC intervention activities. The release of the federal government financial commitments is contingent on the states providing their matching funds; however, many states are in arrears in this regard.

A significant part of UBEC activities is also devoted to supporting mechanisms that help improve school enrolment and drawing in out-of-school children. In this respect, the free school meal program in Osun and Kano States has recently been supported. According to the research team's interview with staff from UBEC, a pilot free school meal program was previously launched in 12 states and the FCT in the 2005/2006 session. In Nasarawa State, school enrolment of pupils increased by 19,000 within three months of the start of the free school meal program. The pilot program could not be scaled up due to lack of funds.

Effectiveness of the Policy

The UBE scheme has largely been successful, as the first nine years of education remain free and compulsory in Nigeria. In addition, UBEC pays examination fees for primary six and JSS3 students and issues certificates to children that progress up to JSS3. The operation of the UBE scheme does not, however, preclude the involvement of the Parent Teacher Association (PTA) in the educational system. PTAs typically charge students a modest levy.

Stakeholders and Power Relationships

The relations among the various stakeholders involved in the UBE program have largely been devoid of conflict. The federal government provides broad policy direction while the state and local governments implement the policy. Decisions taken at the National Council of Education are statutorily binding on the three tiers of government.

4.3.2 Mass Transit Program

Objective(s) of the Program

Bus Rapid Mass Transit program implemented by the Federal Capital Territory Administration is an illustration of existing publicly financed mass transport schemes in Nigeria. The mass transit program seeks to facilitate commuters' transportation, mainly within Abuja and its suburbs. After the removal of subsidy in 2012, the FCT approached the Nigerian Infrastructure Bank (NIB) for support for mass transit buses. Prior to this period, in 2004/2003, the FCT bought some buses from Germany and Brazil. Also in 2014, the FCT procured some Chinese-made buses—200 such buses were ordered but, according to testimony in Key Information Interviews, only 100 have been delivered. This procurement was based on advice from the Nigerian Infrastructure Advisory Facility (NIAF), a program sponsored by the British Government under DFID. NIAF advises government on infrastructural development and provides a technical backstop to government and its agencies on infrastructure issues.

Target Groups, Beneficiaries and Costs

The target beneficiaries are mainly public sector employees and informal sector operators who belong to the category of people that may be hurt by fuel price increases.



Mode of Operation

The mass transit scheme is designed as a bus rapid transit (BRT) program managed by the Abuja Urban Mass Transit Company. The company has a Managing Director who oversees the activities of the scheme. The fee for commuters on the BRT is pegged at ₦50 to ₦100 (USD 0.25 to USD 0.50)¹⁹ maximum per ride. However, it was discovered that the fares charged to commuters were insufficient to sustain the implementation of the program, given the prevailing price of diesel and petrol and the number of trips the buses make in a day.

With the support of SURE-P, the FCT introduced branded taxis that were allocated to private sector transport operators whose vehicles were too old to satisfy road-worthiness stipulations. The program was originally intended to provide 1,000 taxis but, according to Key Information Interviews with national policy-makers, only 180 were eventually released. The criterion for owning the taxis by the beneficiaries is presentation of a letter of recommendation by any of the accredited road transport associations based in Abuja. The idea is for the beneficiaries to trade their old vehicles for new ones provided by the government at an additional but subsidized cost to be repaid in instalments. Vehicles withdrawn from beneficiaries are turned into scrap metal by a Japanese agency to clear Abuja Road of old vehicles through an end-of-life vehicle program. The cost of the new car is about ₦2.5 million (USD 13,000), out of which SURE-P pays ₦500,000 (USD 2,510), while beneficiaries are required to make a down-payment of ₦500,000 (USD 2,510). In total, beneficiaries are expected to pay about ₦1 million (USD 5,000) to government to own the brand new air conditioned car. Car trackers are also installed in the taxis to ensure that they are not diverted for use outside the FCT, Abuja.

Effectiveness of the Policy

According to Key Informant Interviews, in the experience of the FCT the mass transit scheme has been generally effective and largely embraced by the commuters. By contrast, the BRT scheme has broadly failed in most of the states in Nigeria due to poor implementation and corruption. Under SURE-P intervention, the mass transit scheme only succeeded in the FCT.

Stakeholders and Power Relationships

The need to have a working system devoid of corruption in the management of the mass transit scheme is crucial for successful implementation of the program. Although the government minister or state governors may control mass transport schemes, the possibility of self-interest among other levels of authority and stakeholders can affect the performance of the mass transit program.

4.3.3 Fertilizer E-Wallet Program

Objectives of E-Wallet Program

The E-wallet program represents a radical policy change in the area of farm input distribution in Nigeria, designed to replace the inefficient and corruption-ridden system associated with the government purchase and distribution of farm inputs to smallholder farmers. The main objective of the E-wallet program, started in 2011, is to guarantee direct access by these farmers to the federal government subsidy for farm inputs by eliminating middlemen from the distribution chain. The E-wallet allows farmers to receive subsidized electronic vouchers for fertilizer and seeds directly on their mobile phones. The farmers then use their electronic vouchers to pay for these inputs from private sector agricultural input dealers.

¹⁹ All information gathered from Key Informant Interviews derives from summer 2015. As a result, all conversions of naira to United States dollars are based on an average 2015 exchange rate of ₦199.2 per USD 1. Values are rounded to the nearest relevant dollar units.



Target Groups, Beneficiaries and Costs

Robust targeting was crucial to the success of the E-wallet scheme. Consequently, the government conducted a farmers' enumeration exercise prior to the scheme's inception. Despite this, the Federal Government of Nigeria is currently implementing the Nigeria Agriculture Payment Initiative (NAPI) to improve the targeting of agricultural interventions by collecting biometric data on all farmers in the country. With the NAPI, the agricultural input subsidy money would be transferred into an E-wallet card that farmers can access through ATM machines. About 14.5 million farmers are registered as participants in the E-wallet program, but only about 7 million farmers have benefited from the program at least twice in the last three years. This is because the NAPI ID card was planned to be released in three batches. The first batch was intended to capture 4.5 million farmers, the second 7 million farmers and the last batch to capture those that have only participated once in the program. The program seeks to ensure that by 2016 all qualified farmers are issued with identity cards to minimize identification problems.

Mode of Operation

The distribution of fertilizer and other farm inputs is anchored on a model that targets the smallholder farmers directly. This takes the form of a conditional cash transfer called the E-wallet system. Based on a previously developed register with contacts of smallholder farmers in every state of the Federation, the government subsidy for fertilizer is forwarded to the farmers' phones through the E-wallet. Under the E-wallet program, a farmer is eligible for one free bag of fertilizer. The system has subsequently been modified from 100 per cent subsidy support to a participatory subsidy regime. Under the new arrangement, the government pays 50 per cent of the cost of a bag of fertilizer (shared equally by the federal government and state government) while the farmer pays 50 per cent. The government, however, remains at the centre of the value chain, linking the farmers to the distributors by informing the latter about the locations of farmers being supported by the program. As regards seedlings, the federal government distributes high-yield seeds free to farmers in the first year. In the second year the farmers pay 10 per cent of the cost, 20 per cent in the third year, and 30 per cent in the fourth year.

Effectiveness of the Policy

The E-wallet scheme has been so successful that several other countries—including China, Brazil and India—have shown interest in adopting the system. A number of evaluations have concluded that the scheme has performed successfully (Jato & Terna, 2015; GrowAfrica, 2016), although some have concluded that the policy provides disproportionately higher benefits to richer farmers (Alabi & Adams, 2014).

Stakeholders and Power Relationships

There have been few power plays among stakeholders in the implementation of the E-wallet system. The program has been considerably institutionalized, as the newly inaugurated government has shown commitment to continue the scheme, and officials in the Federal Ministry of Agriculture are keen on ensuring it is sustained.

4.3.4 NAPEP Project Care of the People' (COPE) Conditional Cash Transfer Program

Objectives of COPE

The general objective of COPE is to provide cash transfers to the poor to enable them to meet their health and education needs. The cash transfer empowers poor families in rural areas to access education and health facilities that would have been out of their reach.



Target Groups, Beneficiaries and Costs

According to interviews with government policy-makers, COPE targets the roughly 22 per cent of Nigeria's population estimated by the National Bureau of Statistics to be in extreme poverty. Since available funds are insufficient for the millions of Nigerians in this category, certain criteria are constructed for selecting beneficiaries. These criteria include physically challenged heads of household and female-or teenage-headed households. Those that qualify by these criteria can be granted a cash transfer of up to ₦160,000 (USD 803) a year. A household enjoys this benefit only once a year because of the large number of potential beneficiaries.

Mode of Operation

The heads of households that satisfy COPE conditional grant criteria receive ₦5,000 (USD 25) every month. It is also a requirement that children in these households achieve at least 80 per cent school attendance. The monthly grant adds up to ₦60,000 (USD 301) per annum, and is called the Basic Income Guarantee (BIG). The Office of the Senior Special Assistant to the President on Millennium Development Goals (OSSAP-MDGs) also extends a lump sum payment referred to as Poverty Reduction Acceleration Investment Money (PRAIM) to these households. This money is meant to assist them to set up businesses that would generate incomes enough for them to pay their children's school fees. An evaluation of the program in Kuje, Abuja, revealed that household heads earned up to ₦7,000 (USD 35) in a month from their businesses, which suggested that they could make enough income to sustain payment for the school fees of their children.

Stakeholders and Power Relationships

According to Key Informant Interviews, there were occasional power plays among stakeholders, particularly at the planning stage of the program, especially in terms of influencing the list of beneficiaries. Overall, however, the interrelationship among the federal, states and local governments as regards the cash transfer policy has been smooth.

4.3.5 Family Economic Advancement Program (FEAP)

Objectives of the Program

The program is aimed at enhancing the well-being of the family by alleviating distress due to lack of income or sustainable means of livelihood.

Mode of Operation

The FEAP involves extending grants to families judged by community leaders to be in distress in the assessment of the and after verification by the FEAP office at the Federal Ministry of Women Affairs. The grant is not a fixed amount, as it depends on family size, the nature of the project the beneficiaries are engaged in and the magnitude of fund allocation to FEAP by the federal government. The beneficiaries are monitored to ensure they respect the terms of their agreement with FEAP, and may be prosecuted in proven cases of diversion of grants to uses other than those specified in the agreement. The FEAP has been in operation since 2006 but is being restricted to only a few communities due to a lack of funds. The intervention takes place every year, but funds are often not sufficient to take care of the many potential beneficiaries. Thus, the program is yet to be extended to the entire country.



Effectiveness of the Program

This program has been largely successful, although few families have benefited from it. The checks and balances integrated into the program have enhanced its success. Communities also facilitate the effectiveness of the program by acting as watchdogs to ensure that beneficiaries use the grants appropriately. In communities where the program has been implemented, feedback indicates that economic activity improved and the crime rate declined.

Stakeholders and Power Relationships

The targeted communities, beneficiaries, the Ministry of Women's Affairs and non-governmental organizations (especially in the area of monitoring) are the stakeholders. According to Key Informant Interviews, the power relationships among the stakeholders have been cooperative and smooth.

4.3.6 National Directorate of Employment (NDE) Programs

The NDE has four major focus areas: the Vocational Skill Development Program, the Small-Scale Enterprises Program, the Special Public Works Program and the Rural Employment Promotion Program. Some new schemes were introduced subsequently, while older programs were reviewed to make them more effective.

Vocational Skill Development Program

This program exposes unemployed youths (mostly those with school leaving or primary school certificates or no formal education) to vocations of their choice, essentially to empower them for self-employment. These vocations typically include tailoring, auto repair, refrigeration and air-conditioning, vulcanizing, carpentry, furniture making, hairdressing and welding. Initially, there was a collaboration between NDE and trainers/craftsmen across the country, who were paid N 1,000 (USD 5) monthly for every trainee they admitted. Recently, NDE, with support from the OSSAP-MDGs, established skills acquisition centres in three states (Gombe, Katsina and Abia). Subsequently, these skills acquisition centres were set up in several other states. The key stakeholders of the program are the unemployed (especially the youths), the master craftsmen, the trainers or instructors, collaborating organizations, local governments and collaborators from the State Houses of Assembly who include NDE activities as part of their constituency projects and programs.

Small and Medium Enterprises (SMEs) Program

This program provides trainings and retrainings for graduates and entrepreneurs on ways of establishing, running and financing small and medium-scale businesses. The training modules include basic business training targeted at non-graduates and non-retirees while an equivalent module targets graduates and retirees. The program also exposes participants to the development of business ideas, preparation of feasibility reports, risk analysis and other important knowledge and skills for successful business practice. After training, some of the beneficiaries are given startup funds while others are linked to financial institutions that might wish to finance their business ideas, for which the NDE stands as a guarantor for the loans obtained.

The Micro Enterprise Enhancement Scheme of the NDE supports poor households in local communities with a soft grant of ₦10,000 (USD 50) to expand their businesses and trades. The grant is targeted exclusively at those that are already engaged in some line of business.



Special Public Works Program (SPWP)

The SPWP began as the Community Development Scheme, focusing on infrastructural development. The stakeholders of this program includes communities, local government areas and councils, some states, NGOs and those in need of infrastructure development. The Graduate Attachment Program (GAP) was introduced a few years later to provide temporary employment to some of the unemployed graduates of higher education institutions on completion of the National Youth Service Corps (NYSC) program. These graduates are interned with organizations to develop practical skills in the hope they would eventually find employment with these organizations. A monthly stipend of N 10,000 (USD 50) is paid to these interns for the period of the attachment.

Rural Employment Promotion Program

This program, formerly called the Agriculture Program (AP), organizes training in various aspects of agricultural practices such as crop and livestock farming. The program has two modules: the **Rural Agricultural Development Training Scheme**, targeted at school leavers and primary school certificate holders and those with little or no formal education; and the **Integrated Farming and Training Scheme (IFTS)**, which targets mainly graduates. IFTS uses an integrated approach that exposes the trainees to every aspect of farming (crop and livestock). The NDE also runs **Agricultural Skill Training Centres (ASTCs)** which operate modular farms. The trainees are attached to practising farmers and therefore gather hands-on experience and practical skills on farm business at these centres. On completion of training, some of the trainees are provided with financial assistance in the form of loans to set up their own farms.



5.0 Options for Compensating Vulnerable People for Fuel Subsidy Removal

The analysis presented in this report demonstrates that any fuel subsidy reform compensation measures must be designed and implemented without political interference or discrimination. The objective of any compensation program should be to mitigate the impact of fuel subsidy removal on the poor and vulnerable groups, irrespective of their political affiliation, ethnicity, religion, gender or any other bias. From the review conducted in this study, and global experiences of compensation programs associated with fuel subsidy reform, the basket of possible measures that could be considered includes the following:

- Universal cash transfers
- Targeted cash transfers
- Targeted fuel subsidies or dual pricing
- Transport vouchers
- Fuel vouchers
- Other vouchers or subsidies (e.g., education)
- Rural electrification programs
- Lower electricity tariff for poor households
- Gradual fuel price increase
- Directed social spending
- A portfolio of relief measures (e.g., transport vouchers plus tax rebates for essential commodities such as staple foods, drugs, etc.)

Variants of some of these measures have been applied in Nigeria either as instruments for cushioning the impact of hikes in the price of fuels or as part of economic empowerment programs targeted at the poor and vulnerable segments of the Nigerian population. In this respect, relevant specific programs as shown in Section Four of this report include:

- Free school meals for school children
- Free basic education
- E-Wallet for farm inputs for smallholder farmers
- Care of the people (COPE) program of NAPEP
- Vocational skills development program of the NDE
- Special public works program of the NDE
- Mass transit programs
- Free maternal health care under SURE-P
- Graduate internship scheme under SURE-P
- Road construction and rehabilitation under SURE-P
- Skill acquisition programs and loan scheme for poor women

Considering the effectiveness of these programs in the past, the global experiences with similar programs presented in this report, and the social and economic diversity of Nigeria, it is our view that a portfolio approach to compensating the poor would be most beneficial for addressing the impact of fuel subsidy removal. Accordingly, a portfolio of compensation mechanism for achieving the short-term gains of cushioning the immediate impact of fuel subsidy removal, while also making significant



contribution to the realization of the long-term objective of poverty eradication is suggested. This portfolio of compensation mechanisms for future reforms could include the following measures, which can be combined as appropriate to reflect the needs and capacity of each state and the FCT.

1. Transport vouchers
2. Mass transit schemes
3. E-Wallet for smallholder farmers
4. Free school meals for school children
5. Free health care for the vulnerable
6. Cash transfer scheme
7. Vocational skills development program

5.1 Transport Vouchers

Target Beneficiaries

As demonstrated in Mozambique, transport vouchers can be used to cushion the effect of high transport fares that may follow the removal of fuel subsidies. The vouchers would be issued to people identified as vulnerable to fuel price hikes. In Nigeria, public sector workers and students are relatively easy to target for transport vouchers. These two categories of people have also been the most strident protesters against the removal of fuel subsidy in the past. Before the implementation of the transport vouchers scheme, a sensitization and communication strategy would be necessary to gain the support of these critical segments of the population for the transport vouchers.

Program Design, Cost Estimates and Potential Benefits

The program should be designed using the federal government's database of Integrated Personnel & Payroll Information System (IPPIS), the payroll of states and local governments, and the list of matriculated students in Nigerian tertiary educational institutions.²⁰ The voucher should be redeemable at fuel stations and acceptable as bus and taxi cab passes. The Central Bank of Nigeria and the Bankers Committee should approve the voucher design so that fuel stations, commercial buses and taxis can present them for payment at designated participating banks. Every public sector worker should qualify for a monthly voucher equivalent to 30 per cent of the transport allowance. Since students are expected to remain in school during the session, a student should be eligible for a free voucher of ₦5,000 (USD 25)²¹ per semester, and consequently, the free voucher would cost ₦10,000 (USD 50) per session per student.

Apart from the initial cost of voucher design and security printing, the cost of the program would be 50 per cent of current transport allowance of public sector workers plus the costs of issuing free vouchers to students of tertiary educational institutions in Nigeria. According to the latest available data, there were 1,691,141 students in Nigerian higher educational institutions in 2008/2009 session (see Shu'Ara, 2010). Assuming the number has not significantly increased, the cost of the free voucher would be around ₦16.9 billion (USD 85 million) per annum.

²⁰ Tertiary educational institutions in Nigeria include universities, polytechnics, monotechnics, and colleges of education.

²¹ All information gathered from Key Informant Interviews derives from summer 2015. As a result, all conversions of naira to United States dollars are based on an average 2015 exchange rate of ₦199.2 per USD 1. Values are rounded to the nearest relevant dollar units.



The potential benefits of the transport voucher scheme are:

- Public sector workers and students are able to receive immediate relief from the pain of increased transport fares.
- Resistance of removal of fuel subsidy is considerably reduced.
- More public sector workers would prefer use of mass transit buses to personal cars for commuting to work, thus reducing the number of vehicles on the road and reducing the level of carbon emissions by vehicles.
- Students receive a new education subsidy in the form of transport vouchers.
- A transport voucher scheme is adaptable to provide compensation over the short, medium or long term, as deemed most appropriate by policy-makers. If a short- or medium-term policy was introduced, the value of vouchers could be gradually reduced in the months after the economy has recovered from the shock of any fuel price increase.

Challenges

The design of the transport vouchers requires security features that may be costly to set up. In view of dwindling government revenue, securing the initial funding for issuance of the transport vouchers may be difficult. The success of a transport voucher scheme would also depend to a large extent on the existence of efficient mass transport schemes. Otherwise, the vouchers would be used mainly for fuel purchase, and low-income individuals who do not own vehicles and instead use transport services, especially students, may be frustrated by inability to use the vouchers on decent commercial vehicles.

5.2 Mass Transit Schemes

Target Beneficiaries

Mass transport schemes are not new to the country and have in the past been used as a short-term palliative measure for cushioning the effect of hikes in the price of PMS. The target beneficiaries include a broad spectrum of the population such as workers in both public and private sectors, commuters in urban areas and rural dwellers that have business engagements in urban areas. Private sector transport companies and informal sector commercial transport operators are also target beneficiaries. This is because the commercial transport business in Nigeria is dominated by the private sector, and public sector participation should aim to provide a synergy for efficient transport service delivery. The primary objective of a mass transit scheme would be to keep transport fares low and affordable for the poor. It is expected that the availability of new mass transit buses will make existing transport operators cautious in raising prices.

Program Design, Cost Estimates and Potential Benefits

A mass transit scheme should be organized as a concessional loan program to state governments, Federal Capital Territory Administration and private transport companies. Informal sector transport operators should be encouraged to organize themselves into registered cooperatives. No collateral should be required for the loan, but beneficiaries should make an upfront payment to the government for a fixed percentage of the cost of the buses to be purchased, and the loan and repayment rate should be set at agreed fair rates. The number of buses to be procured for the scheme should be determined by requests received from states and transport companies that indicate interest in the program. If demand for the buses cannot be accommodated within available resources, the demand by private sector companies should take precedence since the private sector has repeatedly proven to be the best manager of the road transport business in Nigeria. The buses should be purchased



through a transparent procurement process with the active participation of representatives of the states and transport companies in determining the vehicle brands and technical specifications. Such a mass transit scheme should be aligned with the proposed transport voucher scheme, and transport operators should be obligated to service designated routes where there is a heavy concentration of commuting workers and students. Considering the significance of mass transport as a measure that would have immediate and direct effect in stabilizing transport fares, the government should allocate a proportionate share of subsidy savings to the program.

The potential benefits of the mass transit scheme are:

- Stabilization of transport fares after fuel subsidy removal, especially by keeping transport fares at levels affordable to the poor.
- Job creation arising from employment of new transport services personnel that will operate the new mass transit buses.
- Formalization of the informal sector transport operation.
- Improved efficiency of existing mass transit schemes.

Challenges

Data for planning the number of buses and designating of routes for the mass transit operation is non-existent in most of the states in Nigeria, and hence it is difficult to determine the optimal approach for allocating funds to states and private sector companies that may be interested in the scheme. Since there would be no collateral backing for the loans, potentially high loan default rates may threaten the scheme's sustainability. The successful integration of the mass transit scheme with the transport voucher program would depend on the ease with which vouchers can be exchanged for money.

5.3 E-Wallet for Smallholder Farmers

Target Beneficiaries

The main objective of the federal government's existing E-wallet program is to provide smallholder farmers direct access to subsidies for the procurement of farm inputs. The E-wallet program has proved highly successful in delivering subsidy to intended beneficiaries. A major constraint on the program is the lack of sufficient funds to scale up its level and reach. The target of the E-wallet program should remain the smallholder farmers whom it has empowered to expand output and improve their incomes, while contributing to the reduction of food import-dependency in the economy. A considerable part of savings from fuel subsidy removal should be invested in the E-wallet program in order to improve its performance.

Program Design, Cost Estimates and Potential Benefits

This program should be designed as a support for the E-wallet program of the Federal Ministry of Agriculture, and should thus be aimed at strengthening the performance and reach of the current E-wallet program. The support should directly focus on improving the access of smallholder farmers to fertilizer because fertilizer is the major input that determines their farm yields and consequently their realizable income.

Under the E-wallet program, a farmer is entitled to one free bag of fertilizer (₦5500 (USD 28)): a farmer buys two bags but pays for one. If a farmer buys four bags, he or she gets one bag free and pays for three bags. This program could be increased to a subsidy for two bags under the condition that the farmer pays for two bags. The E-wallet cost-sharing formula would be: the government



pays 50 per cent of the cost of two bags of fertilizer (federal government, 37.5 per cent and state government, 12.5 per cent) while the farmer pays 50 per cent of the cost. By this cost-sharing formula the level of subsidy payment by the state governments and FCT is retained at the cost of half a bag of fertilizer, as in the extant E-wallet cost-sharing formula. This E-wallet compensation program is expected to encourage more farmers to obtain four bags of fertilizer, which will enable them to increase the amount of land that they cultivate. In effect, there would be further improvement in farm output and improved interest in agricultural production in the rural areas.

Challenges

The success of this scheme hinges a great deal on a foolproof list of practising farmers to avoid leakages from poor targeting. Inadequate funding may also constrain the overall level of achievement.

5.4 Free School Meals for School Children

Target Beneficiaries

The target beneficiaries of free school meals should be children from poor households. Free school meals should be encouraged and supported in states that have similar programs. A conditional grant should be established to assist other states to embark on free school meals.

Program Design, Cost Estimates and Potential Benefits

The main objective of the free school meal program is to encourage school attendance by children and wards of rural and urban poor populations to help them concentrate at school and assimilate their lessons. The program should primarily focus on states with lower school enrolment than the national average. The meals provided should mainly come from local agricultural produce to foster backward linkage effects. We estimate that it would cost ₦200 (USD 1) per meal to provide a decent mid-day meal for a child. Due to the expensive nature of this program, it should begin with a pilot of 2,000 pupils per state. States that desire to increase the number should provide resources to fund the additions. The beneficiary schools should be selected based on the criteria of location within areas of relatively low school attendance in rural and urban poor areas.

At the rate of ₦200 (USD 1) per meal and 2,000 pupils per state and the FCT, the free school meal program would cost ₦14.8 million (USD 74,000) per day and ₦74 million (USD 371,000) per week. If a term is approximately 14 weeks and there are three terms in a year, the pilot free school meal program would cost ₦3.1 billion (USD 16 million) annually. As more funding resources become available, the pilot scheme can be scaled up and even extended to secondary schools.

Challenges

The main challenge of the free school meal program is the lack of funds to sustain the program, especially in regions of relatively poor school attendance. There is also the risk associated with catering for large numbers of children. Thus, the program would require caterers with sufficient experience in catering for large numbers of people while paying ample attention to hygiene issues.

5.5 Free Health Care for the Vulnerable

Target Beneficiaries

A free health care program for children up to the age of 5, pregnant women and the elderly should be implemented to reduce the vulnerability of the poor to morbidity and mortality due to inability to pay for the high cost of health care services.



Program Design, Cost Estimates and Potential Benefits

The program of free health care for the vulnerable should be an improvement on the maternal and Child Health (MCH) program under SURE-P. Under the MCH program there are 500 SURE-P supported Primary Health Care Centres (PHCCs) spread across the 36 states and the FCT (Nwosu & Ugwuera, 2014). These PHCCs should be equipped with necessary health care infrastructure and improved working conditions to retain health care workers and improve services. As of July 2013, the total workforce at the 500 SURE-P supported PHCCs was 6,630. These workers provide health care services that include quality antenatal, skilled birth delivery and post-natal services to previously underserved rural poor women. We propose that after a careful audit of the 500 PHCCs, a grant of up to ₦5 million (USD 25,000) each should be made available for their upgrade to improve the health infrastructure. A quarterly grant of ₦1 million (USD 5,000) should be provided to each of the PHCCs for the purchase of essential drugs and critical health materials and consumables that may not be affordable by the poor.

In addition to the wage bill of the workers, the cost of the free health care program for the vulnerable is estimated at ₦2.5 billion (USD 13 million) for health infrastructure upgrade and ₦2 billion (USD 10 million) for drugs and health materials.

The benefits of the free health care program for the vulnerable include:

- Reduction in maternal mortality.
- Reduction in child mortality.
- Improvement in productivity of rural dwellers and urban poor.

Challenges

High-quality health care delivery services are expensive to access and maintain. The free health care for the vulnerable program is unlikely to completely care for the health needs of the poor. The major constraints in this respect are the lack of funds and dearth of highly skilled health care workers willing to work in the PHCCs.

5.6 Cash Transfer Scheme

Target Beneficiaries

The cash transfer scheme would offer cash allowances to unemployed graduates of tertiary institutions while undergoing internships in corporate or government organizations to acquire practical skills and experience that would make them employable, as well as to those engaged in direct labour public works projects.

Program Design, Cost Estimates and Potential Benefits

The design of this program draws on the Graduate Internship Scheme (GIS) under SURE-P. The program's main objective is to reduce graduate unemployment by creating opportunities for graduates to be engaged for a period of one year in reputable firms or public sector agencies where they can acquire skills and experience to enhance their chances of securing regular employment. It is a conditional cash transfer program through which graduates receive cash transfers as stipends. A graduate would have to satisfy one of two conditions to qualify for the stipend. First, they would need to be accepted for an internship with a private firm or public sector agency relevant to their academic qualifications or career aspirations. In turn, the organizations would be expected to admit the intern as a part of their workforce for one year. Second, they would need to be participating in a special public works program, which may include direct labour on public works projects.



For the program, we propose that the federal government pays 60 per cent of the minimum wage (₦10,800 (USD 54)) as a monthly stipend to the interns. In the first year, each state and the FCT should enrol a maximum of 2,000 unemployed graduates. The cost of the stipends would sum up to ₦799 million (USD 4 million) per month and ₦9.6 billion (USD 48 million) per annum.

The benefits of the program include:

- Improved skills for unemployed graduates which may lead to paid or self-employment.
- Reduced youth restiveness and crime.

Challenges

The main challenge of the program is the risk that a considerable number of the interns might remain unemployed after their internship.

5.7 Vocational Skills Development Program

Target Beneficiaries

The vocational skills development program should be based on the existing National Open Apprenticeship Scheme (NOAS) of the NDE. NOAS is aimed at making young secondary school leavers acquire vocational skills to enhance their capacity for self-employment. School leavers and the master craftsmen that facilitate the trainings are the target beneficiaries of the program. The program should also admit unemployed graduates that are interested in vocational training.

Program Design, Cost Estimates and Potential Benefits

The National Open Apprenticeship Scheme (NOAS) is a vocational training program that operates in the informal sector with micro, small and medium-sized enterprises. Under the program young secondary school leavers are recruited as trainees and deployed to the relevant informal sector enterprises to learn their desired vocational trade. They are paid stipends to take care of daily transport expenses and possibly subsistence costs, while the master craftsmen are paid monthly fees for admitting the trainees as apprentices in their enterprises. On successful completion of the training program, a graduate of NOAS is eligible for a resettlement loan managed by the National Directorate of Employment (NDE) or may be linked to development banking institutions such as the Bank of Agriculture, Bank of Industry and Microfinance Banks to access enterprise development loans.

The cost of the program encompasses stipends for the apprentices and training fees for master craftsmen. Training fees will vary by trade. We estimate an average training fee of ₦10,000 (USD 50) per trainee per annum. We also assume a stipend of 30 per cent of minimum wage per month (i.e., ₦5,400 per month (USD 27) for each trainee. We recommend that each state and the FCT should recruit 1,000 trainees. The trainees' stipend would cost ₦199.8 million (USD 1 million) per month and ₦2.4 billion (USD 12 million) per annum. The trainers' fees are estimated at ₦370 million (USD 1.9 million) per annum. The total annual cost of the vocational skills development program amounts to about ₦2.8 billion (USD 14 million) on the assumption that the program would be implemented within the existing NDE framework.

The main benefit of the vocational skills development program is job creation by apprenticeship graduates who would subsequently become entrepreneurs and potentially operate their own businesses. While undergoing training, the apprentices provide labour for their trainers and thus contribute to the growth of their businesses.



Challenges

Monitoring of the training activities by qualified vocational skills development managers, timely payment of trainees' stipends and trainers' fees, and provision of adequate funding for trainees' resettlement after successful graduation from the program are crucial for effective program delivery.

5.8 Institutional Framework for Program Implementation

Creating new institution(s) to manage the compensation schemes is unnecessary. Existing Ministries, Departments and Agencies (MDAs) with mandates relevant to the compensation programs should be repositioned to take on the responsibility of program implementation. A new Directorate for Subsidy Reinvestment Monitoring (DSRM) should be created under the National Planning Commission (NPC). The DSRM may not have access to the Subsidy Reinvestment Fund but should have the mandate to monitor programs financed through the Fund. The Fund should be domiciled in the Office of the Vice President to assure high-level oversight of expenditure. Since the Vice President is the Chairman of the NPC, the periodic report of the DSRM should be submitted directly to him through the Minister of National Planning who, by the 1999 constitution, is the Deputy Chairman of the NPC. The Nigerian Institute of Social and Economic Research (NISER), which is a parastatal of the NPC with a relevant mandate, should conduct periodic impact evaluation of the programs, starting with a baseline survey of the target beneficiaries at the inception of the fuel subsidy removal compensation programs.

There should be a coordinating department and principal implementing agencies for the implementation of each of the fuel subsidy removal compensation programs. Table 16 presents the relevant institutions that may be engaged for the implementation, while Table 17 presents the summary of the cost estimates for the programs. Based on an understanding that one of the principal motivations for subsidy reform among government agencies is fiscal consolidation, the proposed seven programs have been budgeted such that they could be executed with a budget not exceeding ₦250 billion (USD 1.3 billion) in the first year of implementation. This is only a fraction of the average subsidy costs paid by Nigeria during periods of high oil prices—around 20 per cent, for example, of the ₦852 billion (USD 5.3 billion) spent on fuel subsidies in 2013, taking into account currency devaluation in the intervening years. As deemed appropriate, the scale of compensation could therefore be expanded for some or all of these programs, while still constraining the deficit related to the fuel subsidy.


Table 16. Institutional Framework for implementing the fuel subsidy removal compensation schemes

Compensation Program	Coordinating Department	Principal Implementing Agencies	Program Monitoring
1. Transport vouchers	Federal Ministry of Finance	CBN Commercial Banks Federal Ministry of Transport	DSRM, NPC
2. Mass transit schemes	Federal Ministry of Transport	State Ministries of Transport FCT Department of Transport Bank of Industry	DSRM, NPC
3. E-Wallet for smallholder farmers	Federal Ministry of Agriculture	State Ministries of Agriculture FCT Department of Agriculture Commercial Banks CBN Federal Ministry of Finance	DSRM, NPC
4. Free school meals for school children	UBEC	Federal Ministry of Education State UBEC States Ministry of Education Federal Ministry of Health State Ministries of Health Federal Ministry of Agriculture States Ministries of Agriculture FCT Departments of Education, Health and Agriculture	DSRM, NPC
5. Free health care for the vulnerable	Federal Ministry of Health	States Ministry of Health FCT Department of Health	DSRM, NPC
6. Cash transfers	Federal Ministry of Finance	Federal Ministry of Industry, Trade and Investment State Ministries of Commerce and Industry Federal Ministry of Works States Ministries of Works	DSRM, NPC
7. Vocational skills development program	National Directorate of Employment	SMEDAN Bank of Industry Bank of Agriculture Microfinance Banks	DSRM, NPC

An independent body to conduct periodic impact evaluation of the programs starting with a baseline survey of the target beneficiaries at the inception of the oil subsidy removal compensation programs.


Table 17. Cost estimates for the fuel subsidy removal compensation programs

Compensation Program	Target Groups	Number of Beneficiaries	Rates	Cost
1. Transport vouchers	<ul style="list-style-type: none"> Public sector workers and students in tertiary institutions 	<ul style="list-style-type: none"> 1,691,141 students (2009/10) Public sector workers 	<ul style="list-style-type: none"> 30 per cent of the transport allowance of public sector workers ₦5,000/student/semester 	<ul style="list-style-type: none"> ₦16.9 billion per annum 30 per cent of the transport allowance of public sector workers
2. Mass transit schemes	<ul style="list-style-type: none"> Workers in both public and private sectors Commuters in urban areas, and rural dwellers Private sector transport companies Informal sector commercial transport operators 	<ul style="list-style-type: none"> 36 States and FCT 	<ul style="list-style-type: none"> 100 mass transit buses per state (& FCT) at the rate of ₦19 million per bus 	<ul style="list-style-type: none"> ₦70.3 billion (the cost should be at least 10 per cent of subsidy savings)
3. E-Wallet for smallholder farmers	<ul style="list-style-type: none"> Smallholder farmers 	<ul style="list-style-type: none"> 14.5 million farmers 	<ul style="list-style-type: none"> 75 per cent of the cost of two bags of fertilizer per farmer at the rate of ₦5,500 per bag 	<ul style="list-style-type: none"> ₦119.6 billion
4. Free school meals for school children	<ul style="list-style-type: none"> Children in primary schools 	<ul style="list-style-type: none"> 2,000 pupils per state and the FCT 	<ul style="list-style-type: none"> ₦200 per meal per child 	<ul style="list-style-type: none"> ₦3.1 billion per annum
5. Free health care for the vulnerable	<ul style="list-style-type: none"> 500 Primary Health Care Centres (PHCCs) Rural dwellers 	<ul style="list-style-type: none"> 500 PHCCs 	<ul style="list-style-type: none"> Grant of N5 million per 500 PHCCs for facility upgrade Quarterly Grant quarterly of ₦1 million per 500 PHCCs for drug procurement 	<ul style="list-style-type: none"> ₦2.5 billion for health infrastructure upgrade and ₦2 billion for drugs and health materials per annum
6. Cash transfers	<ul style="list-style-type: none"> Unemployed graduates of tertiary institutions 	<ul style="list-style-type: none"> 2,000 unemployed graduates per state and FCT 	<ul style="list-style-type: none"> 60 per cent of minimum wage (₦10,800) as monthly stipend to the interns 	<ul style="list-style-type: none"> ₦9.6 billion per annum
7. Vocational skills development program	<ul style="list-style-type: none"> Secondary school leavers and unemployed graduates interested in vocational training 	<ul style="list-style-type: none"> 1,000 trainees per state and the FCT 	<ul style="list-style-type: none"> Average training fee of ₦10,000 per trainee per annum Stipend of 30 per cent of minimum wage per month (i.e. ₦5,400 per month) 	<ul style="list-style-type: none"> Trainees' stipend: ₦2.4 billion per annum Trainers' fee: ₦370 million per annum

Total cost estimates for items 1 to 7 is ₦226.8 billion. Hence, it is possible that the budget for the seven proposed programs of compensation would not exceed ₦250 billion at the year of their inception. These rough cost estimates do not, however, include the cost of administering the programs.



6.0 Conclusion

Reform of the fuel subsidy regime is fundamental to the overhaul of the Nigerian economy and the achievement of inclusive—and sustainable—economic diversification and growth. The debate on subsidies for refined petroleum products has produced strong arguments for and against the removal of fuel subsidy. There has been a growing consensus that the fuel subsidy regime is not sustainable, and in January 2016, the government took its first steps forward with the introduction of its “price modulation” policy for gasoline and household kerosene. This removal of fuel subsidies, however, portends a significant encroachment on disposable income of the poor and vulnerable segments of the population. While it is sustainable now during a period of low oil prices, once world oil prices rise again it could worsen the livelihood conditions of the poor. Some form of compensation measures may be necessary to help them cope with higher prices—or subsidies could return once again.

The analysis in this report examined the potential compensation mechanisms for mitigating the impact of high domestic fuel prices on weak and vulnerable segments of Nigerian society. The study reviewed the operation of the fuel subsidy regime in Nigeria, assessed global experiences with compensation mechanisms for the impact of fossil fuel subsidy removal, surveyed Nigeria’s experiences in addressing the impact of fuel price hikes and reviewed the performance of a selected group of social protection programs aimed at assisting the poor.

The study demonstrates that the pricing of petroleum products in Nigeria is laden with controversies due to the lack of transparency in the determination of the expected open market price of petroleum products. The fuel subsidy regime has given rise to inefficiency, leakages, waste and massive corruption, providing overwhelming evidence in support of the government’s recent moves toward fuel subsidy removal. Since the imperative for fuel subsidy removal is so compelling, managing the fallout from the removal of fuel subsidies requires compassionate and courageous political leadership. Galvanizing and sustaining the trust of the people in the leadership is critical for maintaining the necessary support from stakeholders and attenuating resistance to fuel price increases. The new government has the mandate, goodwill and significant trust of the Nigerian people. A prudent, humble and accountable disposition is required to improve the level of trust and continue the ongoing transition to a market-determined pricing regime, where prices may rise or fall in line with international trends.

Compensation measures have not been used during the recent price adjustments in 2016. But depending on the performance of the Nigerian economy and trends in world oil prices, the government may need to have a basket of policies—designed and implemented without political interference or discrimination—that can cushion the effect of fuel prices increases above a certain level. From the findings of this study, compensation mechanisms that could be applied in the immediate or short term following a significant price increase include:

1. Transport vouchers
2. Mass transit schemes
3. E-Wallet for smallholder farmers
4. Free school meals for school children
5. Free health care for the vulnerable
6. Cash transfer scheme
7. Vocational skills development program



Considering the effectiveness of these programs in the past, the global experiences of similar programs that have been presented in this report, and the social and economic diversity of Nigeria, it is our view that a portfolio approach to compensating the poor would be most beneficial for addressing the impact of fuel subsidy removal. While recognizing that no solution would be perfect, we are guided by the relevant lessons of international experiences enunciated in this report for the eight options proposed as programs for assisting those who are vulnerable to hike in fuel prices. No single option can suffice. A range of programs, however, can achieve the short-term gains of cushioning the immediate impact of fuel subsidy removal, while also making significant contributions to the realization of the long-term objective of poverty eradication in Nigeria. A portfolio of compensation mechanisms can also be combined as appropriate for each state and the Federal Capital Territory.

Creating a new institution or institutions to manage the implementation of such compensation mechanisms is unnecessary. Existing ministries, departments and agencies (MDAs) that are responsible for the measures mentioned above should be organized to take charge of the implementation. A new Directorate for Subsidy Reinvestment Monitoring (DSRM) should be created under the National Planning Commission (NPC). The DSRM should not have access to the Subsidy Reinvestment Fund but should have the mandate to monitor programs financed through it. The Fund should be domiciled in the Office of the Vice President to assure high-level oversight of expenditure. Since the Vice President is the Chairman of the NPC, the periodic report of the DSRM should be submitted directly to him through the Minister of National Planning who, by the 1999 constitution, is the Deputy Chairman of the NPC.



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