Understanding the Impact of the Removal of Fuel Subsidies on the Zambian Economy

A Case Study of Lusaka and Western Provinces
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## Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACF</td>
<td>Agriculture Consultative Forum</td>
</tr>
<tr>
<td>CPI</td>
<td>Consumer Price Index</td>
</tr>
<tr>
<td>CPM</td>
<td>Cost-Plus Pricing Methodology</td>
</tr>
<tr>
<td>CUTS</td>
<td>Consumer Unity &amp; Trust Society</td>
</tr>
<tr>
<td>DSGE</td>
<td>Dynamic Stochastic General Equilibrium</td>
</tr>
<tr>
<td>EAZ</td>
<td>Economics Association of Zambia</td>
</tr>
<tr>
<td>ERB</td>
<td>Energy Regulation Board</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>IMF</td>
<td>International Monetary Fund</td>
</tr>
<tr>
<td>KR</td>
<td>Kwacha Rebased</td>
</tr>
<tr>
<td>LPG</td>
<td>Liquefied Petroleum Gas</td>
</tr>
<tr>
<td>MEWD</td>
<td>Ministry of Energy and Water Development</td>
</tr>
<tr>
<td>NFT</td>
<td>Ndola Fuel Terminal</td>
</tr>
<tr>
<td>OMCs</td>
<td>Oil Marketing Companies</td>
</tr>
<tr>
<td>RFSF</td>
<td>Rural Fuel Subsidy Fund</td>
</tr>
<tr>
<td>SURE</td>
<td>Subsidy Reinvestment and Empowerment</td>
</tr>
</tbody>
</table>
TAZAMA  Tanzania – Zambia Mafuta
TOR     Tema Oil Refinery
TTCI    Travel & Tourism Competitiveness Index
UPP     Uniform Pump Pricing
ZV      Zambian Voice
Acknowledgements

Authors would like to acknowledge the input by all officials who participated in the data collection process and all stakeholders who took time off their busy schedules to respond to the questionnaire. Special thanks are due to Agriculture Consultative Forum (ACF), Economics Association of Zambia (EAZ), and Zambian Voice (ZV) for successfully commissioning the study. Finally, this work of research would not have been possible without the support of the Zambian Governance Foundation (ZGF).
Executive Summary

On April 30, 2013, the Government of Zambia made a decision to reform the fuel subsector by removing government subsidy on fuel. A ‘subsidy’ can be any preferential treatment, financial or otherwise, provided by a government or public board to consumers and producers. The Zambia government had been using the fuel subsidy to cushion consumers from high and often volatile fuel costs for the various household uses. Reasons that are normally given to support the need for subsidies by governments include a desire to tame fuel-price induced inflation, the need to support industries, and the fact that fuel subsidies can be used as fiscal tool or instrument to cushion vulnerable sections of the society from high fuel costs.

On the other hand, fuel subsidies can be a significant cost to the government, particularly given the high volatility of fuel prices, which leaves governments encountering severe financing problems when international oil prices are high. In addition, fuel subsidies tend to crowd out public sector investments and encourage excessive fuel consumption, resulting in government expenditures on subsidies exerting pressure on the balance of payments of fuel importing countries.

At the time the subsidy was removed, the government had spent over K500 billion in April 2013, which was projected to rise to K1.2 trillion by year-end, representing 3.4 percent of the 2013 total budget. As such, the subsidy had a crowding-
out effect on growth enhancing social and capital investments. This view is also shared by the International Monetary Fund (IMF) (2013b), which notes that subsidies are a problem in practically every country in the world, as they take up a significant amount of country revenues. In 2011, it is estimated that subsidies amounted to US$1.9 trillion, about 2½ percent of global Gross Domestic Product (GDP), or 8 percent of all government revenues, (IMF 2013b).

The Zambian government further argued that the benefits from the subsidy policy had not been shared equally among the respective household classes, as the rich tend to benefit more. In that regard, the Government’s point of view was that the poor had been subsidising the rich on fuel pump prices, defeating the key objective of cushioning the poor. Thus, the government indicated plans to invest the savings accruing from the scrapping of the fuel subsidy in programmes with more social benefits for the poor, including building health and education facilities and road construction and social protection.

Against this background, CUTS International Lusaka, Agriculture Consultative Forum (ACF), Economics Association of Zambia (EAZ), and Zambian Voice (ZV), with financial support from the Zambian Governance Foundation (ZGF), commissioned this study to evaluate the impact of the subsidy removal. Primary data was gathered in four selected districts of Kafue, Lusaka, Kaoma and Mongu. The study sought to evaluate the welfare implications of the fuel subsidy reform implemented in Zambia, identify gaps in the reform process and issues that need to be addressed to ensure that the subsidy reform is successfully implemented. It is expected that the findings from the study will provide hard evidence to inform policy discourse and awareness raising activities aimed to influence different actors thinking and decisions and more
importantly, assisting government towards making pro-poor policy decisions on fuel subsidies.

The study is mainly based on primary data collected through the use of questionnaires, to estimate the effects at the micro level as well as published official economic statistics to estimate the impact on the macro level. There were critical groups of stakeholders who were targeted for interviews to understand how they had reacted to the fuel subsidy removal. These stakeholders could either have reduced consumption of fuel as a result of the subsidy or maintained their consumption patterns, whilst passing on the cost to the final consumers. A sample of about 444 respondents was targeted, distributed across the five categories of households, farmers, wholesalers and firms in the manufacturing and tourism sectors. Four districts in two provinces, Western Province and Lusaka, were targeted, with the districts composed of two urban and two rural setting. The primary data analysis was also corroborated by an analysis of secondary data, in particular, inflation.

An analysis of the inflation trends show that inflation was being contained well during the first four months of the year, declining steadily over the months from 7.0 percent in January to 6.5 percent in April 2013. However, the removal of the fuel subsidy saw the downward trend being reversed in May (7 percent), before stabilising at 7.3 in June and July and a downward trend being witnessed in August (7.1 percent).

Thus while the shock had some inflationary pressures, it appears the system had already adjusted, as inflation appeared to be falling again. Transport costs increased significantly following the subsidy removal, as reflected by the transport costs overall contribution to inflation of 0.2 percent in January to 0.4 percent in May, 0.5 percent in June, 0.6 percent in July and 0.7 percent in August 2013. The contribution of food and non-alcoholic beverages, which was the largest contributing item to inflation marginally increased from 3.2
percent in April to 3.4 percent in May, 3.8 percent in June, 3.7 percent in July and 3.5 percent in August.

Main findings from the interviews show that in absolute terms, expenditure for the households increased significantly following the removal of the subsidy. Just before the subsidy removal in April, the average household monthly expenditure for the respondents was about Kr1,391.51. The average change in household expenditure as at July 2013 when the study was conducted was about Kr 429. This implies that on average, a household registered a 30.8 percent increase in monthly expenditure, which is a worse off position even after adjusting for inflation.

Although the impact on expenditure can be argued to have been more pronounced in urban areas, rural areas were equally affected by the subsidy removal. The average monthly expenditure for rural households increased by about 22 percent following the subsidy removal. For urban areas, average monthly expenditure increased by about 34.6 percent following the removal of the subsidy. The current household expenditure for the households is now about Kr1,820.52. Given that the average monthly income for the households who were interviewed is about Kr2,288.8, it implies that the expenditure to income ratio is about 80 percent.

Before the removal of the subsidy, this constituted only about 61 percent, thus a loss in savings can be attributed to the subsidy removal. This can be attributed to both the direct and indirect effects of higher fuel prices, since fuel expenditure now constitutes only about 11 percent of expenditure and 9 percent of total household income. The increase in prices of consumable goods due to fuel induced costs could account for the indirect costs.

Thus, the removal of the fuel subsidy had a significant impact on households, as it affected their disposable income resulting in reduced spending on both economic and social
requirements. This implies a loss in consumer welfare which needs to be compensated by mitigatory measures. The scaling up of the cash transfer scheme under the 2014 Budget Statement is a step in the right direction.

Among the arguments that are normally given to support subsidy removal, is the fact that the poor do not normally benefit from it as they are a privilege of the rich. However, and realising that the subsidy that was being provided was not targeted, the removal of the subsidy would always have inflationary pressures which even the poor cannot escape from. Based on the income categories of the respondents under the survey, the income groups of the respondents can be classified into four groups; those averaging up to K1100 per month and below (the lowest income earners); those averaging K2600.5 (low income group); those averaging K4450.5 (middle income) and those earning about K6000 and above (the relatively rich).2

The results of the survey reveal than on average, those earning KR6000 and above saw the highest increase in their expenditure per month, increasing by about KR705. Those with an average income of KR4450.5, KR2600.5 and KR1100 saw their expenditure increasing by about KR604, KR467 and KR328 respectively. Thus on average, the impact of the subsidy removal on expenditure increases with income.

However, when this change in expenditure is calculated relative to the average income, it becomes clear that the impact of the subsidy removal was more significant on the low income earners than the relatively rich. For the lowest income earners, the change in expenditure constitutes about 29.9 percent of their average income, while for the low income group; this represents about 18 percent of their income. The change in expenditure only constitute about 14 percent of the middle income’s average monthly income and about 12 percent of the rich’s income. Assuming that the lowest income earners
can be classified as poor, this implies that the impact was felt more by the poor than the rich.

The impact of the fuel subsidy reform on the manufacturing sector has not been uniform, mainly given the varying levels of fuel usage. The surveyed firms indicated significant stress on the back from the fuel subsidy reform. The results show a 4 percent decline in diesel consumption from an average of 109,988 litres in April 2013 to 105,588 litres in July 2013. Similarly, petrol consumption witnessed a 0.09 percent decline from a monthly average of 5,751 in April to 5,746 litres in July 2013, which is an indication of the fact that manufactures are heavy users of diesel compared to petrol.

In the tourism sector, 84.38 percent of the surveyed tourism players noted that the share of fuel to total expenditures increased from an average of 8 percent to 10.68 percent following the removal of the fuel subsidy. The increase in fuel costs as a share of total expenditures resulted in the tourism players cutting down on their fuel consumption as players adjusted their cost structure to remain viable. Faced with higher fuel costs, 38 percent of the tourism players increased the prices of their services by 8 percent, whilst 62 percent maintained their price levels, despite the fuel price increases.

Fuel constitutes an important input for agricultural production. It is also an important factor in determining the cost of availing the farmers’ produce to the market through transport costs. Following the removal of the fuel subsidy, about 25 percent of the farmers using diesel reduced their consumption of the commodity by an average of 40 percent while about 33 percent of the farmers reduced consumption of petrol. This implied that a significant proportion of the farmers absorbed the price increase per litre of fuel following the removal of fuel subsidies. In this regard, following the removal of the subsidy on fuel, the average cost of fuel as a
proportion of the total costs incurred by farmers increased from 21 percent to 28 percent. This was particularly of concern as incomes in the agriculture sector were generally very low.

With regards to wholesalers and retailers, 60 percent of the respondents reduced their consumption by an average of 27 percent. Despite the reduction in consumption of fuel, a look at the average expenditure on fuel by the wholesalers and retailers would reveal that it actually increased from an average of 12 percent to 18 percent following the removal of the subsidy on fuel. The net effect of the removal of the subsidy would however be lower as this was also a result of the general movement in inflation during the three month period. This could have adverse implications on profitability if the price of goods being sold were not adjusted upwards or demand remained the same or deteriorated.

The subsidy removal generally had inflationary impacts on the economy as evidenced by inflationary trends following its removal. However it was introduced at a time when the economy was facing low inflation and was in line with the single digit inflation target under the SADC macroeconomic convergence framework, thus the timing of the removal of the fuel subsidy can generally not be faulted. However, the negative effects noted above could have been better managed had the reform been effectively communicated through a consultative process, that involve all stakeholders. This would have allowed stakeholders more time to adjust their fuel consumption patterns.

Furthermore, there is need to ensure that savings from the subsidy are effectively channelled towards supporting the government’s public sector investment programme, rather than consumptive spending.

The government is also urged to consider other strategic mitigating measures to compensate for the loss to the poor,
due to the subsidy removal. This can include targeted cash transfers and free education and health as well as facilitating more efficient public transportation system. The implementation of measures identified in the 2014 National Budget Statement, thus, is important.
The Government of the Republic of Zambia, in April 2013 implemented reforms in the fuel sector by removing subsidies on fuel, a development which was received with mixed reactions. Households, farmers and industry have called on the government to review its position and restore the fuel subsidy. However, the government has stated that the subsidy was unsustainable and a drain on the fiscus. Present literature from the International Monetary Fund (IMF) backs governments’ move. IMF (2013b) paper on Energy Subsidy Reform; Lessons and Implication, revealed that subsidies are a problem in practically every country in the world. It is estimated that, subsidies in 2011 amounted to US$1.9tn, the equivalent of about 2½ percent of global GDP, or 8 percent of all government revenues.

Similarly, the Zambian government contests that it had already spent over K500 billion, by the time the subsidy was removed in April 2013 and the projected cost for the entire year was K1.166 trillion.  

Among other reasons, the government was concerned by the imbalance and leakage in the trickledown value chain of the subsidy that was being provided. Government noted that the poor have been subsidising the rich on fuel pump prices, thus the government has indicated plans to invest the savings accruing from the fuel subsidy in programmes with more social benefits for the poor, including, building health and education
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facilities and road construction and social protection.

Whilst the benefits of the planned programmes arising from the fuel subsidy reform are long term, the immediate effect was an economy-wide sharp rise in fuel prices. The cost of petrol increased by 21 percent to Kr 9.91, diesel to Kr 9.20 and kerosene to Kr 6.83. The proportion of Zambia’s population living in multidimensional poverty is currently at 64.2 percent with 68.5 percent living on less than US$1.25 a day. This might entail that affordability of essential commodities and services consumed by most Zambian citizens is questionable, on the back of the fuel price increases.

Despite the fuel price increases, there are the proponents who strongly support the removal of these subsidies and are calling upon other stakeholders to support the decision while citing the need to save funds for re-distribution as a major reason. This group consists of development partners and international financial institutions, some civil society organisations (CSO), who have always been sceptical of the subsidies.

Secondly, there are also neutralists who argue that the subsidy removal was ill timed, abrupt and considering the current poverty levels, they are proposing that this subsidy reform path should have been done in a phased manner (after appropriate compensatory measures were put in place).

Thirdly, there are strong opponents, including famers and households, who are calling for the immediate reversal of this decision while highlighting the fragile economic state of the country and inflationary effects this development was having on most basic consumer goods and services (which the poor cannot afford) as a major concern. This came up from the interview results to be discussed later.

In view of the foregoing, what is clear from these varied positions was the absence of a research position on the potential impact of the fuel subsidy reform, on the ordinary
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people and the economy. Specifically, there has been limited research on the impact of phasing out or removal of the fuel subsidy in Zambia. Therefore, research remains a key tool in accurately informing any position.

It is against this background that Consumer Unity & Trust Society (CUTS) International Lusaka, Agriculture Consultative Forum (ACF), Economics Association of Zambia (EAZ), and Zambian Voice (ZV) conducted a research to better assist informing the present discourse on the fuel subsidy removal. This consortium of organisations partnered with a common understanding that, for any meaningful discourse to ensue (either for policy engagement and requisite capacity building/awareness generation), evidence based research was key in informing such subsequent actions. In this regard, this consortium of organisations, with financial support from ZGF, commissioned this study to ascertain the consumer and producer welfare losses/gains arising from the removal of fuel subsidy.

Study Objectives

The overall objective of this study is to contribute to a deeper understanding of the nature and dynamism of the fuel subsidy removal on the Zambian economy, with specific focus on Lusaka and the Western Provinces. This would shed light on the kind of policy interventions to inform capacity building/awareness generation and advocacy endeavours that are required to inform state and none-state actors’ policy actions on fuel subsidies moving forward.

This study seeks to evaluate the welfare implications of the fuel subsidy reform implemented in Zambia by assessing the impact of the fuel subsidy removal on key sectors of the economy. It assesses the reform process against best practice, discusses issues that need to be addressed when designing
subsidy reforms to enhance success and assesses the extent to which the reform process has buy-in from stakeholders.

**Methodology**

Literature review was undertaken to give inputs into the tools that are necessary in building the framework for the study. Firstly, there was need for a general understanding of the theoretical framework on how fuel subsidies affect the economy and economic agents. Secondly, the study borrowed heavily from the best practice involved on strategies and remedies for subsidy removal. Thirdly, literature review helped shed light on the dynamics of the fuel industry in Zambia. This was particularly important since the nature of the industry would play a role in determining the effects of the subsidy.

Evaluating the direct impact of the fuel subsidy removal requires data on household and firm expenditures on fuels for cooking, heating, lighting, and transport. This data was collected using a structured questionnaire. There were critical group of stakeholders who were targeted for interviews to understand how they had reacted to the fuel subsidy removal. These were households, farmers, wholesalers and firms in the manufacturing and tourism sectors. These stakeholders could either have reduced consumption of fuel as a result of the subsidy or maintained their consumption patterns. Understanding the manner in which these stakeholders behaved was critical in estimating the impact on the key economic variables.

Farmers, who rely heavily on fuel, were interviewed to understand whether they had made any adjustments to their farming behaviour that would affect agriculture output. Such inference is necessary as it would be useful in giving an idea about the likely impact on industry as well as the economy at
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Large, based on linkages between industry and agriculture sector.

Wholesalers and retailers are also important stakeholders for primary data as they would also shed light about how much the fuel subsidy removal affected their operations. Although the findings were to be complemented by cost of the food baskets as revealed during inflation calculation and cost of living determination, this was also important in revealing whether the retailers and wholesalers were passing all costs to consumers.

Stakeholders from other critical sectors of the economy, especially the main economic drivers and heavy users of fuel were also interviewed to understand whether the subsidy removal had, in a way, affected their production costs and how they had managed to deal with the higher cost of production. The manufacturing sector, for example, was a heavy user of fuel and the implication on costs of production in the context of competition in the market was explored.

Tourism was also an important sector that could be easily affected by the subsidy given its usage of the transport systems by travellers and service providers, including tourist activities. Some of these sectors were chosen on the basis of their importance in shaping Zambia’s economic standing as reflected in the Sixth National Development Plan and the Diagnostic Trade Integrated Study (DTIS).

The study also made an attempt to assess the possible impact of the subsidy on the poor and the marginalised section of the population. Thus, the respondents also included people in the rural areas, given that most poor households live in rural areas, to check whether they had experienced any changes in their daily routine following the subsidy removal. In addition, gender dimensions (in terms of impact of this reform on women) were factored into the questionnaire to
ensure that any gender implications are also reflected on the results.

A sample of about 444 respondents was targeted, distributed across these categories. The formulas to calculate sample size were based on simple random sampling, where non-response was adjusted for. Under this survey, a 90 percent response was assumed, for which the sample size was then obtained by using estimated proportions, whose variance, under the assumption of simple random sampling, is given as:

where $p$ is an estimate of the proportion of the population that has the characteristic of interest or the probability of success.

The safest estimate of $p=0.5$ is taken because this is the case when maximum variability occurs. Generally the greater the variability among units in the population, the larger will be the sample size needed to achieve specific levels of precision. It is proposed that $p=0.5$ be used for this study to give the largest sample size.

Therefore the simple random sample size is computed as follows:

$$n = \frac{Z^2 \cdot \hat{p} \cdot (1-\hat{p})}{r}$$

where $cv(p)$ is the coefficient of variation for the proportion. This translates to the following:

Adjust the initial simple random sample with the expected response rate and $deff = 1$.

Where $n= \text{the overall sample of 444 respondents}$

$\text{= the initial simple random sample size}$

$r = \text{the expected response rate}$

The total expected sample size was 444 but the target was 500 to enhance quality. The targeted distribution of the
respondents as well as the actual respondents across the identified group of stakeholders was as follows:

<table>
<thead>
<tr>
<th>Category</th>
<th>Targeted</th>
<th>Interviewed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Households</td>
<td>349</td>
<td>335</td>
</tr>
<tr>
<td>Manufacturers</td>
<td>40</td>
<td>25</td>
</tr>
<tr>
<td>Wholesalers and Retailers</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>Tourism players</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>Farmers</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>Total</td>
<td>509</td>
<td>480</td>
</tr>
</tbody>
</table>

There were some limitations in the ability to get a sampling frame to use in identifying the respondents. As a result, the interviewers randomly chose the respondents based on convenience; hence one of the possible shortcomings could be some element of bias introduced in the process.

The questionnaires were designed to extract data on the situation in April 2013, which was the last month before the subsidies were removed and July 2013 which was the time when the study was conducted. Attempts were made to attribute the differences to the subsidy removal. While the degree of precision could be distorted by other causal factors, the authors believe the results are able to reveal the general direction of the impact. Two districts each in two provinces, Western Province and Lusaka, were selected for the survey. Budget constraints entailed identification of the closest provinces that can have both urban and rural settings. In Lusaka
province, Lusaka and Kafue districts were selected while Mongu and Kaoma were selected from Western Province.

The study also made use of published data, which include total government expenditure government revenue inflation and data on fuel.
Understanding Subsidies

Defining Fuel Subsidies

Subsidies, particularly fuel, are a common strategy employed by governments in many developing and emerging economies, to cushion vulnerable sections of the society from high and volatile prices. Like many other countries such as Nigeria, Namibia, Niger, Ghana, Iran, Peru, Chile, among other countries, (see Table 4), Zambia used the fuel subsidy strategy to shield consumers, from high and often volatile fuel costs for the various household uses including: lighting, cooking and transportation. In broad terms a “subsidy” can be described as covering any preferential treatment, financial or otherwise, provided by a government or public board to consumers and producers.

The International Energy Agency (2010) defines an energy subsidy as “any government action that concerns primarily the energy sector that lowers the cost of energy production, raises the price received by energy producers or lowers the price paid by energy consumers.” In the case of fuel, subsidies allow the price of fuel to remain below free floating market rates, with a view to making the price affordable to citizens, which was the case in Zambia.

These fuel subsidies can either be economy wide i.e., non-discriminatory in approach, and cover every industry and all consumers, or they can be targeted. In the latter, subsidised
fuel is provided to specific sectors of the economy, e.g. agriculture. For Zambia, the fuel subsidy was non-discriminatory and benefited every sector of the economy and consumers equally. The subsidies allowed consumers and firms alike to benefit from cheap fuel at pump.

In essence, the government would fix the pump price through the Energy Regulation Board and absorb any losses arising from changes in the international oil price or exchange rate fluctuations when procuring the feedstock. At the time the fuel subsidy was removed in April 2013, Zambians were paying US$1.48 per litre of petrol, which was less than that prevailing in Zimbabwe (US$1.52), Mozambique (US$1.58) and Malawi (US$1.93) (Figure 1).

![Figure 1: Per litre Cost in Selected Regional Countries in US$](source: World Bank World Development Indicators)

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**Source:** World Bank World Development Indicators
With the removal of the fuel subsidy, changes in international prices of petroleum as well as cost arising from fluctuations in the exchange rate will be passed on to consumers and other players in the petroleum supply chain.

Following the removal of the subsidy, petrol prices in Zambia increased to Kr 9.91, (US$1.98), which is 31.21 percent above the regional average of 1.51 percent, hence Zambia fuel is among the most expensive in the region. Similarly, the price of diesel in Zambia is now averaging US$1.84 per litre, which is 28.13 percent higher than the regional average of US$1.44 per litre. As will be discussed later, the subsidy removal pushed up inflation from 6.5 percent in April to 7 percent in May 2013, mainly on the back of increases in transport cost on account of the higher fuel prices. In order to properly contextualise the effects of the subsidy removal in Zambia, it is important to give a general understanding of the concept of fuel subsidies and how they are expected to operate in general, which will be analysed in the next section.

**Merits and Demerits of Subsidies**

A number of reasons have been put forward by governments to justify the need for fuel subsidies. Some these can be summarised as follows:

- A *desire to tame fuel-price induced inflation*. This is particularly common in fuel importing countries such as Zambia, who have to deal with the transmission of fuel price spikes to the domestic economy, from the international market. The impact can be direct or indirect. The direct impact relates to the higher prices for fuels consumed by households. For instance, following the removal of fuel subsidy by Zambia, cost
per litre of petrol increased by 21 percent to Kr 9.91, diesel to Kr 9.20 and kerosene to Kr 6.83. On the other hand, the indirect impact is mainly on account of higher prices for other goods and services consumed by households as higher fuel costs are reflected in increased production costs and consumer prices. Hence, government interventions will be aimed at countering the negative effects of international fuel price hike. This, however, can be an understandable response, by the governments, to the destabilising effects of sharp increases in world petroleum prices perceived to be temporary. However, recurring shocks to the international petroleum prices and petroleum products makes it imperative for governments to maintain fuel subsidies.

- A desire to support industries. Many countries have used fuel subsidies as a means to support their fledgling industries and agriculture. For example, after the land resettlement programme in 2000, Zimbabwe provided subsidised inputs including fuel to the resettled farmers, with a view to spur production. However, the longer the subsidy remains in place; it encourages higher consumption of the subsidized fuel, which increases the fiscal burden on government. Furthermore, if not properly targeted, the subsidy could be subjected to misuse, thereby defeating the whole objective of subsidising fuel. The pump price fuel subsidy employed by the Zambian Government meant that even the non-deserving households and sectors of the economy could as well benefit. Hence, a targeting strategy would have helped ensure that only the vulnerable households would benefit, which in a way can reduce the burden on the fiscus.
• **Fuel subsidies can be used as fiscal tool or instrument, to cushion vulnerable sections of the society from high fuel costs.** Fuel subsidies can afford governments the ability to provide a highly visible benefit for all its citizens. Such a subsidy is easy to administer for governments. This is particularly the case in low-income countries, where other mechanisms of providing (targeted) social welfare benefits to the population maybe limited; and, given short time horizons, governments may lack the incentive to develop the capacity to design and administer other more efficient (and equitable) means of providing benefits, (IMF 2013a).

On the contrary, fuel subsidies can be undesirable due to a number of factors, including the following:

• Fuel subsidies can be a significant cost to the government, particularly given the high volatility of fuel prices, which leaves governments encountering severe financing problems when international oil prices are high, to cover the subsidy costs. This will be magnified if the demand for oil remain stable, or even grow, because the lack of change in fuel costs can be a significant disincentive for citizens to reduce their fuel consumption. Eventually, the government will be compelled to reform its subsidy policy to lessen the public’s demand for fuel, and hence providing additional fiscal space for the government’s public sector investment programme.

• The benefits of fuel subsidies accrue to higher income groups who tend to consume more fuel (Arzeetal, 2012). Arzeetal, (2012), reviews the evidence from a set of 20
developing countries, and found that most of the benefit of fuel subsidies accrues to the rich: on average, the top income quintile received 6 times more in subsidy benefits than the bottom quintile. Petrol subsidies are the most regressive, with over 80 percent of the total benefits accruing to the top two quintiles.

For diesel and liquefied petroleum gas (LPG) respectively, 65 and 70 percent of subsidy benefits accrue to the top two quintiles. Although the benefits of kerosene subsidies accrue more uniformly across income groups, there is still substantial leakage of benefits to higher income groups. The review estimated that increasing fuel prices by US$0.25 per litre results, on average, in an increase in the cost of living (i.e., of the consumer price index, CPI) of around 6 percent, with this welfare impact being similar across income groups. About half or more of the increase in the cost of living was due to the indirect effect on the prices of other goods, emphasizing the importance of recognizing the large intermediate use of fuel products (especially diesel) by firms and the transport sector (Arze et al., 2012).

- Fuel subsidies also tend to crowd out public sector investments. The Zambian Government contest that by April 2013, it had spent over K500 billion in 2013 on fuel subsidies and the projected cost for the entire year was K1.2 trillion, representing 3.4 percent of the 2013 total budget. In that regard, it would be important to ensure that the additional fiscal space created by savings from the fuel subsidy, is used for growth enhancing social and infrastructure development projects, rather than consumptive spending.
Tapsoba (2012) comes to a similar conclusion using a Dynamic Stochastic General Equilibrium (DSGE) model to estimate the consequences of various measures aimed at fiscal consolidation in India. He showed a scenario under which untargeted transfers, such as universal fuel subsidies, are reduced and replaced with spending on either capital expenditure, or on a combination of capital expenditure and better-targeted subsidies, results in higher growth relative to scenario that brings down the deficit by the same amount but does not reallocate public expenditure.

- Furthermore, low cost fuel encourages excessive fuel consumption, resulting in government expenditures on subsidies exerting pressure on the balance of payments of fuel importing countries. It also aggravates fiscal imbalances, as governments may be spending more on subsidies than social protection, health and education. For instance, the projected cost of the subsidy in 2013 of KR1.166 billion was equivalent to 130.72 percent of the social protection allocation of KR892 million.

  In fact, the government was spending more in subsidy than it was spending on key social services such as housing & community amenities, drugs & medical supplies, health infrastructure, education infrastructure and fertiliser support programme (Figure 2). Hence, over the longer term, the removal of the subsidy, accompanied by a well-designed safety net and an increased social sector spending (health and education), could yield significant improvements in the well-being of low-income and vulnerable groups.
For Zambia, the expectation for this is high given the tone set by the President speech to Parliament during the official opening of the third session of the eleventh National Assembly on September 20, 2013. The President underlined commitment by government to develop a social protection policy to guide the implementation of social safety nets aimed at cushioning the poor and vulnerable groups from poverty. He also called for the development of this policy to be expedited as a compensation mechanism for the removal of subsidies on fuel and maize by the government.

It has also been argued that subsidies diminish the competitiveness of the private sector over the longer term (IMF 2013). Although in the short-run subsidy reform will raise energy prices and increase production
costs, over the longer term there will be a reallocation of resources to activities that are less energy and capital-intensive and more efficient, helping spur the growth of employment. Removing energy subsidies helps prolong the availability of non-renewable energy resources over the long term and strengthens incentives for research and development in energy-saving and alternative technologies. Subsidy reform will crowd-in private investment, including in the energy sector, and benefit growth over the longer term (IMF 2013).
Overview of the Zambia Fuel Industry

Policy and Institutional Framework

The Ministry of Energy and Water Development (MEWD) is Zambia’s principal government body responsible for energy policy formulation and administration. In 1994 the Government of the Republic of Zambia introduced a new National Energy Policy to respond to the critical role played by the energy sector in the socio-economic development of the country. This policy, among other things, provided for the creation of an independent regulator with the responsibility of oversight of the entire energy sector.

In 1995 the Energy Regulation Act Chapter 436 of the Laws of Zambia was enacted. Pursuant to Section 3 of the said Act, the Energy Regulation Board (ERB) was established in 1997 to regulate the entire energy sector in Zambia comprising of electricity, petroleum, and renewable energy sources. The Energy Regulation (Amendment) Act, No. 23 of 2003 amended the Energy Regulation Act, No. 16 of 1995. The need to establish a regulator in the energy sector mainly arose from the liberalization policy which allowed many players to come into the sector and this required an agency to ensure that there was coordination and a level playing field in the sector.
The functions of the ERB as stipulated in Section 5 of the Energy Regulation (Amendment) Act No. 23 of 2003 are that the Board shall:

- issue licences under the Act;
- monitor the efficiency and performance of undertakings, having regard to the purposes for which they were established;
- receive and investigate complaints from consumers on price adjustments by any undertaking, and regulate such adjustments by the attachment of appropriate conditions to licenses held by undertakings or by such other means as the Board considers appropriate;
- receive and investigate complaints from consumers and licensed undertakings on services provided by the undertakings and regulate such services by the attachment of appropriate conditions to licenses held by undertakings or by such other means as the Board considers appropriate;
- approve the location and construction of, and receive and investigate complaints concerning the location or construction of any common carrier or any energy or fuel facility or installation or the carrying out of any works by any undertaking, and regulate such location and construction by the attachment of appropriate conditions to licences held by undertakings;
- in conjunction with the Competition and Consumer Protection Commission (CCPC):
• investigate and monitor the levels and structures of competition within the energy sector with a view to promoting competition and accessibility to any company or individual who meets the basic requirements for operating as a business in Zambia; and

• develop and implement appropriate rules to promote competition in the energy sector”.

• in conjunction with the Zambia Bureau of Standards (ZABS) established by the Standards Act, design standards with regard to the quality, safety and reliability of supply of energy and fuels;

• in conjunction with the Environmental Council of Zambia established under the Environmental Protection and Pollution Act, formulate measures to minimise the environmental impact of the production and supply of energy and the production, transportation, conversion, storage and use of fuels and enforce such measures by the attachment of appropriate conditions to licenses held by undertakings; and

• make recommendations to the Minister as to the measures to be taken through regulations to be made under the Act.

The MEWD oversees the operations of the ERB. The energy sector regulator, ERB and the CCPC are obligated by the Acts that established them to work together in tackling competition issues in the energy sector. Part VI, Section 43 of the Competition and Consumer Protection Act, No.24 of 2010 states that “The Commission shall, for the purposes of coordinating and harmonising matters relating to competition
in other sectors of the economy, enter into a memorandum of understanding with any regulator in that sector, in the prescribed manner and form”.

The National Energy Policy is the main policy document guiding the developments of the energy sector. The policy document contains measures for each energy sub-sector, outlines strategies for implementation and identifies the legal frame required to implement the policy.

The first National Energy Policy of 1994 sought to promote optimal supply and utilisation of energy, especially indigenous energy forms, for socio-economic development in a safe and healthy environment. While the essence of the 1994 Energy Policy objectives remains valid, the social, political, environmental and economic situation has undergone significant changes. Due to the implementation of the 2002 Poverty Reduction Strategy Paper initiatives, the articulation of the Vision 2030 (December 2006), Fifth National Development Plan (2006-2010) and other related programmes, there is new awareness of the integral nature of energy in economic development. This prompted a review of the National Energy Policy (1994) in order to take into account recent changes not only in the energy sector and domestic economy but also the regional and international energy scenarios. Currently in force, is the National Energy Policy (2008).

The sections of the National Energy Policy that are directly relevant to the petroleum sector include: Section 5.4 (Petroleum), Section 5.10 (Household Energy) and Section 5.11 (Energy Pricing). Abridged versions of these Sections of the National Energy Policy are given in Box 1.
Box 1: Relevant Sections on the National Energy Policy to the Petroleum Sector

<table>
<thead>
<tr>
<th>Section 5.4 Petroleum</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Section 5.4.1 Objective</strong></td>
</tr>
<tr>
<td>The policy seeks to ensure an adequate, reliable and affordable supply of petroleum products at competitive and fair prices and also the reduction in importation costs.</td>
</tr>
<tr>
<td><strong>Section 5.4.2 Policy Measure and Strategies</strong></td>
</tr>
<tr>
<td>a) Enhance security and cost effectiveness of supply of petroleum;</td>
</tr>
<tr>
<td>b) To promote the participation of Zambians in the Petroleum Industry;</td>
</tr>
<tr>
<td>c) Improve efficiency in the petroleum industry;</td>
</tr>
<tr>
<td>d) Promote health and environmental safety in the petroleum sector;</td>
</tr>
<tr>
<td>e) Improve petroleum pricing; and</td>
</tr>
<tr>
<td>f) Ensure prompt response to and minimisation of possible emergencies and disasters.</td>
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<table>
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<tr>
<th>Section 5.10 Household Energy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Section 5.10.1 Objective</strong></td>
</tr>
<tr>
<td>This energy policy seeks to reduce dependence on wood fuel and ensure sustainable provision of affordable, reliable modern energy services to rural and urban households as a means of reducing poverty and raising standards of living.</td>
</tr>
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*Contd...*
Section 5.10.2 Policy Measures and Strategies
a) Promote substitution of wood fuel as a household fuel with alternative sources of energy; and
b) Promote energy conservation and substitution at the household level.

Section 5.11 Energy Pricing

Section 5.11.1 Objective
To ensure that energy prices reflect costs of providing energy and also take into account principles of fairness and equity.

Section 5.11.2 Policy Measures and Strategies
a) Promote the use of market prices where appropriate;
b) Where market pricing is not feasible or desirable, to ensure that mandated or regulated prices include allocation of costs among consumers according to the burden they impose on the delivery system;
c) Promoting a reasonable degree of stability and avoiding large price fluctuations from period to period;
d) Providing a minimum level of service to consumers who are unable to afford the full cost; and
e) Where prices are administered (regulation or promulgation), provide a reasonable return on investment.
The Fuel Industry Structure (Upstream and Downstream)

Zambia has no known reserves of petroleum crude. Petroleum is the only energy source in Zambia that is wholly imported. Importation of petroleum products into Zambia is done through two sources. The first and traditional source of petroleum products involves the importation of crude oil (feedstock) through the Tanzania – Zambia Mafuta (TAZAMA) pipeline and Indeni refinery. The second source involves the direct importation of finished products to supplement the volumes processed by Indeni Petroleum refinery. Figure 3 shows the total petroleum imports in Zambia between the years 2000 and 2012.

![Figure 3: Petroleum Imports into Zambia in US$mn, 2000-2012](source: Bank of Zambia, Economics Department)
The supply chain of petroleum products in Zambia has six major players:

- Tanzania – ZambiaMafuta (TAZAMA) Pipelines;
- Indeni Petroleum Refinery;
- Ndola Fuel Terminal (NFT);
- Oil Marketing Companies (OMCs);
- Transporters; and
- Dealers (service station operators).

Figure 4 is a diagrammatic representation of the fuel supply chain linking all the different players through the two sources of petroleum in Zambia.

Figure 4: Petroleum Supply Chain in Zambia

*Source: ERB Status Report on the Petroleum Sector, 2012*
The different players in the petroleum supply chain have different roles and responsibilities from the point of arrival of feedstock in Dar-es-alam or the acquisition of finished products in the region. Table 2 is a summary of the different roles and responsibilities of each player in the supply chain:

Table 2: Roles and Responsibilities of Players in the Supply Chain

<table>
<thead>
<tr>
<th>Facility</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indeni Petroleum Refinery Ltd</td>
<td>• Built in 1973 (simple distillation plant) to process commingled petroleum feedstock</td>
</tr>
<tr>
<td></td>
<td>• Owned 100 percent by the government (TOTAL sold its 50 percent stake to the government in 2009)</td>
</tr>
<tr>
<td></td>
<td>• Design capacity of 1.1 million Metric Tonnes (MT) per year but currently operates at around 50 percent design capacity, and installed capacity has reduced down to 850,000MT</td>
</tr>
<tr>
<td></td>
<td>• Losses of about 10 percent (uses diesel for its own power plants to have stable electricity)</td>
</tr>
<tr>
<td></td>
<td>• Produces Petrol, Diesel, Kerosene, JetA1, LPG, LFO &amp; HFO1</td>
</tr>
<tr>
<td></td>
<td>• Processing fee charged is US$56.10/MT</td>
</tr>
<tr>
<td>Tazama Pipelines Ltd</td>
<td>• Built in 1968 as finished products pipeline and converted to feedstock pipeline after refinery was built in 1973</td>
</tr>
</tbody>
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Contd...
| Ndola Fuel Terminal | • Owned 67 percent by the Zambian government and 33 percent by the Tanzanian government  
• 1,706km long from Dar-es-Salaam to Ndola with 7 pump stations (of which 5 are in Tanzania)  
• Installed capacity of 1.1 MT but down to 850,000 MT per year due to bad state of repair  
• Currently operates at 50 percent capacity  

| Bulk storage facility with a capacity of 72.2 million litres  
• Managed by TAZAMA Petroleum Products Ltd2  
• Charges a throughput fee of K25,000/M3 (K25/L) |
|---|---|
| Oil Marketing Companies | • Procure fuel from TAZAMA and import finished petroleum products for onward sale and distribution to the commercial and retail customers  
• Currently 31 licensed OMCs (from only 10 OMCs in 2003)  
• About 73 percent of the market share concentrated in 4 OMCs, i.e. Puma Energy (33.5 percent), Total (25.7 percent), Engen (8.4 percent) and Kobil (7 percent)  
• Puma, Total, and Engen have the largest retail Network  

| Transporters | • Transporters are contracted by OMCs to transport fuel to various parts of the country |

Contd...
Understanding the Impact of the Removal of Fuel Subsidies on the Zambian Economy

**Oil Marketing Companies (OMCs)**

Although there are many players totalling 23, oil marketing is dominated by two large companies, Puma Energy and Total Zambia, which account for 58.56 percent of the market share, (Figure 5). The remaining 21 companies account for 41.44 percent of the market share (Figure 5).

| Service Station Operators | • Road transportation is commonly used as rail is in a state of disrepair  
|                           | • Over 80 licenced transporters  

|                       | • About 220 service stations in the country with limited presence in the rural areas  
|                       | • 147 (about 67 percent) are located in Lusaka and Copperbelt province  

*Source: ERB Status Report on the Petroleum Sector, 2012*

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**Figure 5: Market Shares of Oil Marketing Companies**

*Source: ERB Status Report on the Petroleum Sector, 2012*
Petroleum Pricing

International Pricing

Like all other commodities, the prices of oil on the international market are determined by various factors, including demand, geopolitical situations, weather conditions etc. The prices which government pays for the feedstock is therefore dependant on the world market price ruling at a given time.

Wholesale Pricing

As the sector regulator, the ERB is responsible for the pricing of petroleum products on the Zambian Market. The petroleum products produced by the Refinery are priced using the Cost-Plus Pricing Methodology (CPM) which takes into account all the costs incurred in importing the feedstock, transporting it to Zambia, and refining it at Indeni. The CPM is used to determine the wholesale price of petroleum products and this is the price at which OMCs buy the product from the Ndola Fuel Terminal.

The elements in the CPM that are used to compute the wholesale prices are shown in Table 3.

When petroleum products are imported by the government, they are sold at the prevailing wholesale fuel prices as determined by the CPM. OMCs rarely import finished products due to the high import duty of 25 percent on petrol and diesel. This import duty is meant to protect Indeni by discouraging OMCs from importing finished products
Uniform Pump Pricing (UPP) was introduced in September 2010 with the aim of reducing fuel (petrol, Diesel and Kerosene) costs in areas that are far from Ndola. Under UPP, urban consumers (i.e. Copperbelt, Kapiri Mposhi, Kabwe, Lusaka and Mkushi) pay slightly a higher price to subsidise the cost of transporting fuel to all other areas of the country.

Prior to the introduction of UPP, the cost of petrol, diesel and kerosene at retail sites farthest from the NFT was higher than the price obtaining at sites closer to the NFT. The UPP mechanism is designed to be self-financing through a Rural

<table>
<thead>
<tr>
<th>Table 3: CPM Cost Elements</th>
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<tbody>
<tr>
<td>(a) Cost of Petroleum Feedstock (supplier invoice/contract)</td>
</tr>
<tr>
<td>(b) Cost of Freight from place of sale to Dar-es-Salaam (C&amp;F)</td>
</tr>
<tr>
<td>(c) Insurance</td>
</tr>
<tr>
<td>(d) Ocean Losses = 0.3 percent of CIF</td>
</tr>
<tr>
<td>(e) Wharfage (Harbour charges) = 1.25 percent of C&amp;F</td>
</tr>
<tr>
<td>(f) Financing Charges, Collateral manager &amp; Insurance costs</td>
</tr>
<tr>
<td>(g) TAZAMA storage fee= US$2/mt &amp; Pumping fee= US$48.52/mt</td>
</tr>
<tr>
<td>(h) Import Duty = 5 percent</td>
</tr>
<tr>
<td>(i) Product Losses Incurred by both TAZAMA and INDENI</td>
</tr>
<tr>
<td>(j) Agency Fee = US$5/mt</td>
</tr>
<tr>
<td>(k) Refinery fee = US$56.1/mt</td>
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</table>
Fuel Subsidy Fund (RFSF). The UPP mechanism works in such a manner that OMCs with service stations that are located closer to Ndola contribute to the RFSF whilst OMCs with service stations further away from Ndola claim from the RFSF.

Independent dealers remit to or claim directly from the RFSF. It is important to note that the UPP mechanism only applies to fuel sold at retail pump stations and does not apply to fuel supplied by OMCs to commercial customers such as mines, commercial farmer’s construction companies under negotiated commercial contracts. Under these arrangements OMCs may sell fuel at prices above or below the UPP prices.

The receipts into and payments from the RFSF are managed by the ERB. A company called Ashfield Resources (Z) Ltd was contracted by Government to be the UPP manager. The UPP manager’s role is to audit OMC claims and contributions into the UPP fund and also to develop a model to determine a UPP which would ensure that the net position is close to zero.

**Evolution of the Fuel Subsidy Policy**

As alluded to earlier, governments all over the world regard subsidies as a means of cushioning those who are most vulnerable among the population from high market prices, by having a proportion of the price of such consumables, paid for using public funds. In Zambia, the fuel subsidy was introduced in order to offset the escalating oil prices and keep the domestic fuel pump prices affordable. Between 2004 and 2008, international oil prices increased from about US$50 per barrel to US$148 per barrel, respectively. This was more than the US$100 per barrel which the Government had projected for that period. International prices for crude oil have continued to increase beyond 2008 as shown in Figure 6.
As such there were concerns that increasing the domestic fuel prices in line with the movements in international oil prices, was going to adversely affect the lives of many Zambians, particularly the low-income people. It was against the backdrop of mitigating the effects of escalating international oil prices that the fuel subsidy was introduced in 2009.

Since then, the fuel subsidy has totalled KR2.5 Billion of which KR179 Million was spent in 2009, KR90 Million in 2010, KR247.6 Million in 2011, KR754 Million in 2012 and KR1.2 Billion from January 2013 to May, 2013 when the subsidy was removed. Table 4 highlights the total expenditure on the subsidy of fuel relative to the GDP and total revenue between 2009 and 2012.
The removal of the subsidy on fuel was also necessitated by challenges on its sustainability due to the government’s expanding fiscal deficit in recent years. The fiscal deficit, which refers to the gap between what is coming into the government treasury in taxes and other receipts against what is being spent was recorded at 3.1 percent of GDP in 2010, 1.2 percent in 2011 and 2.9 percent in 2012. As part of its macroeconomic objectives for 2013, the government has set out to limit the overall fiscal deficit to 4.3 percent of GDP. However, it is projected that the fiscal deficit will exceed the set target and may reach 8.5 percent of GDP.

| Table 4: Total Expenditure on Fuel Subsidy Relative to GDP and Total Revenue, 2009-2012 |
|---------------------------------|---------|---------|---------|---------|
|                                 | 2009    | 2010    | 2011    | 2012    |
| Tax Revenue (Millions ZMK Rebased) | 9,660.0 | 13,125.6| 18,889.0| 20,719.1|
| Total GDP (Millions ZMK Rebased) | 64,615.6| 77,666.6| 93,344.4| 111,049.4|
| Total Expenditure on the Subsidy of fuel (Millions ZMK Rebased) | 179 | 90 | 247.6 | 754 |
| Expenditure on the Subsidy on Fuel as a percentage of GDP | 0.3% | 0.1% | 0.3% | 0.7% |
| Expenditure on the Subsidy on Fuel as a percentage of Total Revenue | 1.9% | 0.7% | 1.3% | 3.6% |
Best Practice in Subsidy Reform

Removal of Subsidies

As already alluded to, there are instances where energy subsidies are necessary. This could explain why the fiscal cost of fuel subsidies amount to about 1.4 percent of sub-Saharan Africa’s GDP in 2012 (IMF, 2013a). Fuel subsidies can be a useful tool by governments in oil importing countries to cushion the public from the full impact of price spikes and spirals that occur in the global market. These could also be important in enhancing access of the poor to fuel to encourage access to fuel based technology by the population. Subsidies can also be useful in those economies that export oil on social equality grounds as they also enable the population to have access to a share in the country’s oil wealth.

Although they are necessary, there is always a time when the fiscal pressure becomes too unbearable, which would call for their removal. However, when a decision to remove fuel subsidies is arrived at, the manner in which it has to be done has to be well managed. Since most economic agents would have built a system around the subsidies, their removal would result in several distortions and disturbances in the manner in which business is conducted. For the poor for example, eliminating subsidies would have significant welfare impact.
36  Understanding the Impact of the Removal of Fuel Subsidies on the Zambian Economy

as the share of energy consumption in their total household consumption is the same as the rich (IMF, 2013a), yet they have limited savings to cope with the increasing costs.

Subsidies that have been operational for a very long time are also bound to attract much resistance as stakeholders would have adjusted to the system in which they exist. For examples, some fuel intensive production processes could have been adopted taking advantage of the subsidy, and such stakeholders would be opposed to their removal. Subsidies may also not have been benefiting all citizens equally, especially due to their resource misallocation effect, which would see the main beneficiaries sponsoring opposition to their removal.

For example, an IMF study established that in Burkina Faso, fuel subsidies were largely serving to sustain the cartelised and inefficient truck transport sector; in Seychelles, large foreign-owned hotels were the main beneficiaries while it were the international airlines in Equatorial Guinea which benefited the most (IMF, 2013a). Such interested parties are thus always bound to cause some resistance to subsidy removal.

It is, therefore, important that the removal of the subsidy be properly designed to cause minimum disruptions and resistance in the economy. Undertaking a comprehensive research on their negative impact of the economy prior to the subsidy removal and then using the evidence as a tool for buy in, is always critical for a smooth fuel price reform. Subsidies generally continue to exist in the economy with minimal resistance simply because those economic agents that are being disadvantaged by their existence remain generally unaware of their negative impact. Thus possession of such evidence would be critical to invoke mind-set changes among the stakeholders.

A comprehensive research would also be a useful tool for debate. Such a research would also be able to counter vested
interests, as it would be able to outline the key stakeholders who are benefiting most from the subsidy, thereby reducing their influence in stirring resistance to the programme. In addition to highlighting the real beneficiaries, research would be able to reveal the actual cost of the subsidy to government and potential fiscal savings from their removal.

A dissemination strategy for the research has to be wide to ensure that all relevant stakeholders get the necessary information to ensure that debate does not start among stakeholders without full information. To ensure that all stakeholders are involved in the whole process, a comprehensive stakeholder mapping and engagement is critical during the research as well as during its dissemination. Of particular importance would be the need to ensure that concerns from the stakeholders are allayed by evidence.

As revealed by IMF (2013a), the subsidy removal strategy also has to be conscious of the impact on all stakeholders, thus there are factors that need to be taken into account in deciding the pace and timing of the removal. If the fuel subsidy has been in operation for a very long time or has been too significant that a huge impact would follow its removal, a gradual process would help dilute the impact. A gradual process would involve a scale down of the subsidy rather than a total removal, as this would allow firms that had taken advantage of the subsidy and invested in technology that consumes a lot of fuel to adjust. A gradual approach would also limit the impact in terms of price increases as well as dampen inflation expectations which could also turn out to be disastrous.

Since subsidies removal generally cause adverse impact on the poor, evidence might not be enough to convince them to support fuel subsidy removal. Thus while the positive impacts are highlighted, the government should also demonstrate how the savings from the subsidy would be distributed to the benefit
of the poor. Since the adverse impact on the poor is mostly the main argument against the subsidies, the government should ensure that the removal of the subsidy is accompanied by clearly outlined mitigation measures that would be credible enough and are seen as enough to offset the adverse effects that would arise (Coady et al., 2006).

Thus the budgetary savings from fuel subsidy removal can be reflected in increased budgetary allocation to health, education and infrastructure or reduced taxes. To enhance credibility, the announcement of the subsidy removal should also coincide with the implementation of these measures with minimum lags.

Subsidy reforms might also fail to get the necessary buy-in from stakeholders even if they fully recognise the fuel subsidy shortcomings. This often arises if the credibility of the government is questionable, with the public generally lacking confidence that the savings would be used in a positive manner. Thus countries with a history of widespread corruption, lack of transparency in the conduct of public policy, and perceived inefficiencies in public spending are likely to fail to have successful fuel subsidy reforms. Lack of credibility is attributed to the reason for the less successful fuel subsidies in Indonesia in 2003 and Nigeria in 2011 (IMF, 2013b).

The government can also put in place transfer schemes to the poor households as compensation mechanisms for the price impact of the subsidy removal. The transfer to low-income households can be maintained in real terms by indexing it to the anticipated inflation from the removal (Coady et al., 2006). The government should also be able to demonstrate how fiscal savings from the subsidy removal have been put to use to continue to manage resistance. For example, fuel subsidy
reforms in Gabon that increased petrol and diesel prices by 26 percent in March 2007 were soon followed by;

- National Social Guarantee Fund cash payments to the poor;
- Assistance to single mothers, especially through a microcredit programme targeting disadvantaged women in rural areas;
- School enrolment fees were waived for pupils enrolled in public schools and school textbooks given free of charge to all primary school pupils; and
- The mass public transport network in Libreville was expanded by 27 buses (IMF 2013a).

Similar reforms in Mozambique, which resulted in increased fuel prices by 38 percent in 2008 were also accompanied by increased budgetary allocations to a range of social protection programmes; increased level of cash benefits to beneficiaries of the Food Subsidy Programme; and an increase in the number of branches of the National Institute for Social Protection from 19 to 30 (IMF, 2013a).

The timing of the subsidy removal is also important from the economic perspective. If the subsidy is removed at a time when the economy is doing very well with low inflation as the inflationary impact would be minimal. For example, in Peru, the success of the fuel subsidy reform in early 2010 could be explained by the stable prices and strong economic growth during that time.

Zambia Approach vs. Best Practice

Based on country experiences, it is quite apparent that the Zambia approach did not take into cognisance all relevant issues to ensure buy-in and preparedness for the stakeholders. Firstly, although the removal of the fuel subsidy was
Understanding the Impact of the Removal of Fuel Subsidies on the Zambian Economy

announced, the government did not widely disseminate official statistics on the amount that the government had been paying out as subsidies and how such payments were affecting the capacity of government to meet other obligations.

In addition, there was no attempt by government to try and trace the main beneficiaries of the subsidy, to ensure that all stakeholders can infer about the possible impact of the subsidy removal. Thus transparency and public communication on the size of energy subsidies and their beneficiaries, which would have been very helpful in kick-starting the reform, was generally lacking.

Secondly, it doesn’t appear there was a carefully planned approach towards fuel subsidy removal. For example, the 2013 National Budget Statement does not mention the removal of fuel subsidies as a strategy, which would have prepared stakeholders for it. In addition, public education and consultations with key stakeholders, which would have helped to get buy-in, were generally not done. This reveals some weaknesses on the approach, as this would have culminated in strikes and demonstrations were it not for the resilience of the Zambians.

Thirdly, given the inflationary impact and distortions from the removal of the subsidy, best practices call for a gradual phasing out and sequencing of the subsidy reforms. However, in Zambia this was not followed, as a sudden total removal of the subsidy was opted for, which caused disturbances in households spending patterns, thereby affecting their welfare. Thus households have to find quick coping solutions to adjust, which could have been easier had this been done in phases.

Fourthly, the government could have tried to enhance credibility by outlining priority programmes and areas to which resources from the subsidy removal would be directed, together with clear time frames as to when this would be done. This bold approach would have allowed stakeholders
to be clear about the benefits of the subsidy reforms. At the moment, there are only speculations as to how the savings would be used, amid concerns among some households that these would be used to fund some inefficiency in the public administration system. Thus the credibility of the government’s commitment to compensate vulnerable groups and use the savings from subsidy reform for well-targeted development interventions is still questionable.

A positive development is that the 2014 National Budget Statement has already provided for some compensatory mechanisms as social protection mechanisms. The 2014 National Budget notes that the September 2013 inflation rate for Zambia remained above the set target due to inflationary pressures associated with the removal of fuel subsidy.

Citing the fuel subsidy regime as poorly targeted as the beneficiaries were not the intended poor, the National Budget presents the social cash transfer scheme as a better social protection policy. Contribution to the social cash transfer scheme will be scaled up by over 700 percent to K199.2 million in 2014, while the Food Security Pack programme will also be scaled up. It is quite apparent that these are being financed partly by savings from the subsidy removal.

In addition, there is also a noticeable increase in funding towards education and health, including programmes on safe water and other associated health hazards affecting the poor. Funding would be produced to try and increase rural access to clean and safe drinking water from the current 61 percent to 65 percent through drilling 2,000 new boreholes, constructing 250 hand dug wells and establishing 50 piped water schemes. In addition, 2,000 boreholes and 100 hand dug wells will be rehabilitated.

Further, rural access to sanitation facilities will also be increased to 48 percent from the current 43 percent by promoting community-based approaches and the construction
of 500 institutional latrines. An amount of K1.28 billion is also set to go towards the construction of 53 new secondary schools and the upgrading of 220 basic schools into secondary schools. An additional 150 primary school classrooms in the rural areas with corresponding 150 teacher houses is also scheduled. Since these are all an increase compared to the previous year, it can be argued that the savings from fuel subsidies are being used to finance these interventions.
Impact of the Subsidy Removal: Assessment of Field Work Findings

The overall impact of the subsidy removal would be expected to trickle down into the whole economy through its impact on some key economic agents. Based on findings from the field research the following can be established about its effects:

Impact of Fuel Subsidy Removal on Inflation

As expected, the removal of the fuel subsidy had an inflationary impact (Figure 7). It was quite apparent that inflation was being contained well during the first four months of the year, declining steadily over the months from 7.0 percent in January to 6.5 percent in April 2013. However, the removal of the fuel subsidy saw the downward trend being reversed in May (7 percent), before stabilising at 7.3 in June and July and a downward trend being witnessed in August (7.1 percent).

Thus while the shock had some inflationary pressures, it appears as if the system had already adjusted to it in three months, as inflation appeared to be falling again. As explained
in section 4, the fuel subsidy removal needed to be properly timed, taking place when the economy was doing relatively well, for it to have minimum inflationary impacts.

The timing of the fuel subsidy removal should best be at the time when inflation is low and the economy is doing relatively well. Based on the falling inflation trend, the subsidy removal appears to have been reasonably well timed. The impact on inflation and on consumers would have been much worse had this been done at a time when inflation was very high.

As expected, transport costs increased significantly following the removal. The contribution of transport costs to overall inflation, which had been a constant 0.2 percent to overall inflation from January to April 2013, doubled to 0.4 percent in May, 0.5 percent in June, 0.6 percent in July and 0.7 percent in August 2013. The contribution of food and non-alcoholic beverages, which was the largest contributing
item to inflation marginally increased from 3.2 percent in April to 3.4 percent in May, 3.8 percent in June, 3.7 percent in July and 3.5 percent in August.

The reluctance of economic agents to pass on all the costs to consumers was however reflected in the month on month inflation statistics (Table 5). The month-on-month inflation rate was recorded at 0.9 percent in May 2013 compared to 0.6 percent recorded in April 2013. This was mainly on account of the jump in non-food inflation, for which transport was the major contributor, by 0.8 percent points from 0.5 percent in April 2013 to 1.3 percent in May 2013.

In May, food inflation did not register any huge changes from the previous patterns in response to the fuel subsidy removal as would be expected. Although non-food inflation registered a significant jump in May, the trend was not significantly different from the cyclical trends that had been

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*Source: CSO*
witnessed in earlier months. It therefore implies that there was not a sudden inflation shock which would have been large enough to be reflected in the month on month inflation trends.

Impact on Households

A sample of 335 households was interviewed, drawn from Lusaka, Kafue, Mongu and Kaoma, being distributed relatively evenly as shown in Figure 8. Out of these, about 21.2 percent were from rural areas while 78.8 percent were from urban areas. Main findings from the interviews are as follows:

Figure 8: Geographical Distribution of Households Respondents

Source: Survey Results
Impact on Household Expenditure

Based on the results, expenditure for the households increased significantly between April 2013 (last month before the removal took effect) and July 2013 (when the research was carried out). In addition to other factors, it is likely that the inflationary impact from the fuel subsidy removal is mostly responsible for the direct and indirect effects of the subsidy removal. Before the subsidy removal, the average household monthly expenditure for the respondents was about Kr1,391.51. The average change in household expenditure following the subsidy removal was about Kr 429. This implies that on average, a household registered a 30.8 percent increase in monthly expenditure, which is quite a significant rate.

Although the impact on expenditure can be argued to have been more pronounced in urban areas, rural areas were equally affected by the subsidy removal. Average monthly expenditure for rural households increased about 22 percent for rural areas following the subsidy removal. For urban areas, average monthly expenditure increased by about 34.6 percent following the removal of the subsidy. The fact that the effect of the subsidy was significantly felt in both rural and urban areas appears to dismiss the notion that the subsidy could have been benefiting only the rich segments of the economy, as rural areas in Zambia are dominated by the poor.

The average household expenditure for the households that were interviewed stood at about Kr1,820.52 after the subsidy removal. Given that the average monthly income for the households who were interviewed is about Kr2,288.80, it implies that the expenditure to income ratio is about 80 percent. Before the removal of the subsidy, this constituted only about 61 percent, thus a loss in savings for households can be attributed to the subsidy removal. This can be attributed to both the direct and indirect effects of higher fuel prices.
On average, fuel expenditure after the subsidy removal constitutes about 11 percent of expenditure and 9 percent of total household income. Since expenditure is reported to have registered a 30.8 percent increase, this was mostly due to the indirect effects as households only spend about 11 percent directly on fuel. Thus the removal of the fuel subsidy had a significant impact on households, as it affected their disposable income resulting in reduced spending on both economic and social requirements. This implies a loss in consumer welfare which needs to be compensated by mitigatory measures. The scaling up of the cash transfer scheme under the 2014 Budget Statement is a step in the right direction.

**Awareness of the Subsidy Removal**

Although there appears that there have been few deliberate awareness campaigns by government to solicit buy-in and acceptance for the reforms from the general public, the people interviewed generally indicated that they were aware of the reforms. About 90 percent of the respondents indicated that they were aware that the government had removed subsidies on fuel.

Awareness is very high in both urban and rural areas; 90.1 percent of the rural respondents indicated that they were aware of the subsidy removal while about 90.5 percent of the urban respondents indicated that they were also aware of this development. Given the critical nature of the commodity, it appears the information on the reforms widely travelled to all users.

**Level of buy-in for the Reform**

Although many households are aware of the subsidy removal, many of the households do not support the decision that the government took to remove them. About 63.6 percent
of the respondents indicated that they do not support the decision, with about 26.6 percent indicating that they support the decision. The remaining 9.9 percent were generally undecided. In terms of geographical distribution, about 21.13 percent of the people in rural areas support the fuel subsidy removal decision while only 28 percent in urban areas support it.

Thus it appears as if efforts to get buy in from the stakeholders were not extended to households, as they are still uncomfortable. A look at the reasons given for supporting the removal would reveal that some households have faith that there would be prudential use of resources saved from the subsidies. Many believe that the resources would be used to fund viable public projects that would enhance infrastructure and economic development at national level such as schools, hospitals and other social programmes that benefit people in the rural and remote areas who hitherto had little help from government.

Others, however, indicated that they supported the decision simply because subsidies were only benefiting a few people in the first place, with government officials and the rich people being the suspected main beneficiaries. Reasons for not supporting the reforms mostly emanate from the inflationary fears associated, which many of them were already experiencing at the time of the interview.

Based on the findings, it is not likely that the public would have accepted the decision if they had been consulted. However, the approval could still have been possible if the consultation had been preceded by awareness generation and information dissemination on benefits of the move and the negative effects of the subsidy.
Gender Dynamics of the Subsidy Removal

Out of the people who were interviewed, about 34.2 percent were female (who were willing to be interviewed) while about 65.8 percent were male. From the survey, it is clear that there were high levels of awareness of the subsidy removal for both men and women. About 89.3 percent of the female respondents indicated that they were aware of the subsidy removal, while about 92.8 percent of the male respondents indicated that they were aware of the subsidy removal.

Gender does not also appear to play a major role on the decision to support the subsidies as both men and women are generally against the reforms. About 29.1 percent of the female respondents indicated that they supported the decision to remove subsidies while about 25.1 percent of male respondents supported the decision.

Given that women are mostly responsible for the daily chores, one would expect all women to be against an event that results in an increase in the prices of basic commodities. However, some women are more concerned about the long-term economic benefits that could arise when the savings from the subsidy removal are used for the general good of the economy.

Impact of the Subsidy Based on Level of Income

Among the arguments that are normally given to support subsidy removal was the fact that the poor do not normally benefit from it as they are a privilege of the rich. However, and realising that the subsidy that was being provided was not targeted, the removal of the subsidy would always have inflationary pressures which even the poor cannot escape from. Based on the results of the survey, the income groups of the respondents can be classified into four groups; those averaging about KR1100 per month and below (the lowest
income earners); those averaging KR2600.5 (low income group); those averaging KR4450.5 (middle income) and those earning about KR6000 and above (the relatively rich).10

The results of the survey reveal that on average, those earning KR6000 and above saw the highest increase in their expenditure per month, increasing by about KR705. Those with an average income of KR4450.5, KR2600.5 and KR1100 saw their expenditure increasing by about KR604, KR467 and KR328 respectively. Thus on average, the impact of the subsidy removal on expenditure increases with income.

However, when this change in expenditure is calculated relative to the average income, it becomes clear that the impact of the subsidy removal was more significant on the low income earners than the rich. For the low income group, the change in expenditure constitutes about 29.9 percent of their average income, while for the lowest income group; this represents about 18 percent of their income. The change in expenditure only constitute about 14 percent of the middle income’s average monthly income and about 12 percent of the relatively rich’s income. This implies that in relative terms, the impact was felt more by the poor than the rich.

Impact on the Manufacturing Sector

The questionnaire was administered to small and medium scale companies in the industrial area of Chinika, Nampundwe and Kafue. The impact of the fuel subsidy reform on the manufacturing sector has not been uniform, mainly given the varying levels of fuel usage. About 68 percent of the surveyed firms were affected by the subsidy removal; whilst the remainder were not affected given that fuel constitute a much small component of their production costs.

The surveyed firms indicated significant stress on the back from the fuel subsidy reform. The results show a 4 percent
decline in diesel consumption from an average of 109,988 litres in April 2013 to 105,588 litres in July 2013. Similarly, petrol consumption witnessed a 0.09 percent decline from a monthly average of 5,751 in April to 5,746 litres in July 2013, (Figure 9) which is an indication of the fact that manufactures are heavy users of diesel compared to petrol.

Although the decline in fuel consumption could be attributed to other factors, such as business seasons characterised by low demand, which affects production activity hence fuel consumption, 26 percent of the interviewed firms attributed the reduction in fuel consumption to the fuel price increase on the back of the subsidy removal.

The results show that of the surveyed companies, 48 percent supported the move by the government to remove the fuel subsidy, with the remainder being against the policy.
or neutral. Those in support of the idea noted that it was a good move because it is intended to help the entire population than few rich retailers and manufacturers. They also noted that despite the short-term negative effects, particularly on prices, there were more benefits in the long term, if the funds saved were invested in social and infrastructure projects that benefit all Zambians.

However, it was noted that the negative effects of the subsidy removal could have been better managed if it was done in a gradual manner. Moreso, involvement of stakeholders prior to the reform could have helped the policy’s acceptance as stakeholders will have had enough time to plan and make the requisite adjustments. They noted that the same way government did on the rebasing of Kwacha, could have been done in this case as well so that could companies adjust their production in response to the new policy.

On the other hand, 20 percent of the respondents urged for an immediate return to the subsidy policy citing its negative effects on prices. They noted that producers simply passed on the resultant cost increases on to consumers as evidenced by the jump in the annual inflation rate from 6.5 percent in April 2013 to 7 percent in May 2013.

In that regard, they argued that the government should find alternative policy measures to provide another relief to business to cushion them from rising production cost as well as the general populace from the fuel price-induced inflation. They also pointed out that government should have first notified the nation on the subsidy reform, to allow companies to adjust their production structure and put in place cost effective measures to accommodate such changes.
Impact on the Tourism Sector

Among the surveyed areas, attempts were also made at identifying players who belong to the tourism industry (e.g. hotels and resorts). On average, 84.38 percent of the surveyed tourism players noted that the share of fuel to total expenditures increased from an average of 8 percent to 10.68 percent following the removal of the fuel subsidy. The increase in fuel costs as a share of total expenditures resulted in the tourism players cutting down on their fuel consumption as players adjusted their cost structure to remain viable.

Faced with higher fuel costs, 38 percent of the tourism players increased the prices of their services by 8 percent, whilst 62 percent maintained their price levels, despite the fuel price increases. The price increases negatively impact on the price competitiveness of the industry, which affects business.

As such, the price increases affected the demand for tourism services resulting in 55 percent of the respondents reporting a fall in revenue of over 16.24 percent. This is particularly true for domestic tourist travelling by road, who are faced with increasing transport costs. This in turn, affects tourists’ expenditure and stay at destination. Many travellers may have to adjust their spending (or vacation length) in order to pay for the additional fuel charges.

In view of the foregoing, 65 percent of the tourism players surveyed, called on the government to immediately reverse its decision on the subsidy removal, citing the negative impact on prices for tourism services, hence reduced demand and sales. On the other hand, 35 percent backed the government move, noting that the long-term benefits of the subsidy reform will outweigh the short-term spike in prices. They however, noted that the negative impact could have been minimised if the government had adopted a gradual approach in phasing
out the fuel subsidy. They also pointed out the need for widespread stakeholder consultations and sensitisation on any such policy decision, prior to its implementation. Widespread consultations help enhance stakeholder buy-in and facilitate smooth implementation of the policy.

In addition, the government should have undertaken research and encouraged debate among stakeholders on the implications, including welfare, prior to fuel subsidy removal.

Furthermore, key to the long-term success of the reform programme is the need for the government to be accountable and channel the money saved towards growth-enhancing infrastructure and social programmes in health and education. In that regard, they called upon the government to come up with a concise programme, which should be communicated to the public, articulating how the money saved from the subsidy reform would be used for the betterment of the Zambian economy. Government was also called upon to outline the key public expenditures that would be financed by the resulting fiscal space created by the subsidy reform, whilst at the same time, specifying specific measures to mitigate the adverse impact of price increases on consumers, in particular lower-income households.

**Impact of Fuel Subsidy Removal on Farmers**

Fuel constitutes an important input for agricultural production. It is also an important factor in determining the cost of availing the farmers’ produce to the market through transport costs. Forty small and medium scale farmers in Kaoma district engaged in agricultural production on an average field size of 18 hectares each were interviewed. Specifically, more than 50 percent of the farmers interviewed had a farm size of less than 2 hectares while the largest farm size was about 40 hectares.
Most of the farmers interviewed consume diesel in the production and distribution of their produce compared to petrol. About 80 percent of the farmers use diesel compared to only 20 percent that use petrol. This insight points to the relative importance of diesel over petrol to farmers. Following the removal of the fuel subsidy, only about 25 percent of the farmers using diesel reduced their consumption of the commodity while 33 percent of the farmers that use petrol reduced the consumption of petrol. The farmers that reduced consumption did so by an average of 40 percent for diesel and 50 percent for petrol. Since the majority of the farmers did not reduce consumption, a significant proportion of the farmers absorbed the shock which exerted pressure on the cost of production.

In this regard, following the removal of the subsidy on fuel, the average cost of fuel as a proportion of the total costs incurred by farmers increased from 21 percent to 28 percent. However, a large majority absorbed this increase in the cost, which had adverse effects on their profitability and viability. This was particularly of concern as incomes in the agriculture sector were generally very low.

It was noted that 70 percent of the farmers sold their main output, maize, to the government through the Food Reserve Agency, which also sets its own price. This limited the capability of some of the farmers to pass on the increase in the cost emanating from the removal of the fuel subsidy. An increase in the price of a 50kg bag of maize by an average of 11 percent was however indicated by those selling to the consumers in the community.

The key drivers of the increase in the cost of production and distribution identified by the farmers were the increase in the cost of transportation of inputs and produce as well as the cost of seed and fertiliser among other inputs. In addition,
the increase in the price of maize to consumers in the community has adversely affected demand.

In view of the forgoing, most of the farmers interviewed were of the view that the government would have done well by consulting key stakeholders who included farmers before removing the subsidy on fuel. Particularly, some of the farmers recommended that the subsidy on fuel should be restored in the rural areas where it was mostly needed. In addition, it was suggested that the government through the Food Reserve Agency should adjust upwards the price at which it was procuring maize from the farmers to take into account the general increase in the cost of inputs following the removal of the subsidy on fuel. This is particularly important as the Food Reserve Agency is the main market for maize which is the primary agriculture product for most farmers in rural areas.

**Impact of Fuel Subsidy Removal on Wholesalers and Retailers**

Wholesalers and retailers were mainly concerned with the price of fuel because of its impact on operational costs through transport and energy among other inputs as well as its inflationary impact on goods. The survey considered an equal proportion of wholesalers and retailers in Mongu and Lusaka. As such, 90 percent of the respondents in Lusaka were wholesalers while 80 percent of the respondents in Mongu were wholesalers.

Following the removal of the subsidy 60 percent of the respondents that bought fuel during the period reduced their consumption by an average of 27 percent. This could imply fewer trips to make orders as well as a reduction in the number of trips undertaken for deliveries both of which have adverse implications on business operation.
Despite the reduction in consumption of fuel, the average expenditure on fuel by the wholesalers and retailers increased from an average of 12 percent to 18 percent following the removal of the subsidy on fuel. This implied that the removal of fuel subsidies increased the cost of operating a wholesale or retail business. This could have adverse implications on profitability if the price of goods being sold were not adjusted upwards or demand remained the same or deteriorated.

The main cost drivers following the removal of the subsidy on fuel as identified by the wholesalers and retailers interviewed were the cost of running generator sets which provide power for some of the business premises as well as the increase in transport costs. The transport costs were important for delivery of supplies to customers as well as for transporting new stock to the business premise. In addition, the wholesalers were faced with a decline in demand for their commodities which were presently relatively more expensive following the adjustment in prices owing to the increase in operational costs and the price of new stock. This poses a notable risk on the viability and profitability of most businesses.

There were varied responses on suggestions of what the government needs to do about the fuel subsidy. Some wholesalers and retailers called for the reinstatement of the subsidy on fuel, others thought the Government should have gradually removed the subsidy in phases, while some thought the subsidy should have been removed on petrol and maintained on diesel which was mainly used in the production process. There were some respondents however who welcomed the move by Government to remove the subsidy on fuel but urged it to apply the savings equitably on the most vulnerable members of society.
Conclusions

The subsidy removal generally had inflationary impacts on the economy as evidenced by high prices for commodities. However it was introduced at a time when the economy was doing relatively well and in line with the single digit inflation target under the SADC macroeconomic convergence framework, thus the timing of the removal of the fuel subsidy can generally not be faulted. Since inflation is mainly driven by food products, the impact was felt by all regardless of income and location. However, as seen by the inflation trends, the economy has already adjusted to inflation as it is beginning to come down. Even if the trend eventually comes back to normal, the damage in terms of impact on poverty would be permanent.

While those households who are relatively better off financially would consume more fuel and thus would be the first to feel the full impact of the subsidy removal, based on the findings from the field, the impact had actually more impact on the low income households than the high income households in percentage terms. The application of the subsidy was non-discriminatory and not targeted hence it had an effect on the broad spectrum of the economy. This was largely due
to the indirect effects of the subsidy removal, which in this case proved to be more critical than the direct effects of increase in the fuel budget to consumers. All products, including the basic commodities and transport, saw their prices rising as a result of inflation, and the poor consumers, including those that do not use much petrol and diesel, would be affected.

Thus, it is not surprising that the survey results reveal that the low-income earners lost about 29.9 percent of their average income to the subsidy removal while the high income earners only lost about 12 percent, despite them consuming more fuel. It is apparent that in Zambia, it is largely the ability to absorb price shocks that matter most when it comes to the impact of the shock into the economy.

In other words, although it was largely the high income earners who were directly benefiting from the fuel subsidy through fuel consumption; the removal of the subsidy affected those who were ill-equipped to withstand the inflationary pressures more than those directly benefiting. There is thus an urgent need for government to find potential ways of compensating the poor for their loss in income due to the subsidy removal. The measures contained in the 2014 Budget Statement can go a long way in filling this gap.

The removal of the fuel subsidy also resulted in a loss of savings for households of about 19 percent. Given the importance of savings as a tool for mobilising investment, there is a potential for this to affect the level of investment for the Zambia economy. Thus unless government increases its expenditure to offset the likely decrease in investment, the fuel subsidy removal can result in a decrease in the country’s GDP.\textsuperscript{11} It is thus important to ensure that all savings from the subsidy removal are channelled towards government expenditure, especially towards infrastructure and social services to ensure that through the multiplier effect, there
would be a trickledown effect to the poor’s income, which could also restore lost savings.

The impact on GDP could also be seen through the manner in which manufacturers have responded to the removal of the fuel subsidy. Despite its importance in the manufacturing process, the survey results show that the manufacturers responded by reducing the consumption of diesel significantly. Such a significant reduction in diesel consumption was likely to reduce output, unless the diesel was being used for non-critical items. But despite scaling down use of diesel, manufacturers still saw the share of fuel in their total costs increasing by about 5 percent.

Given that there were no corresponding increases in prices of the same magnitude (as revealed by annual and month on month inflation trends), then manufacturing firms may have absorbed most of the costs at the expense of consumers, hence their profitability took a knock. The manufacturing sector, which contributes significantly to GDP at about 8.3 percent per year, is likely to contribute lower rates in 2013 due to the removal of the fuel subsidy. GDP would also be expected to take a knock due to this development.

Thus, the government that has to boost GDP through increasing its expenditure using resources that would have been used to cater for subsidies. The expected increase in expenditure in infrastructure and social protection system that are provided for in the 2014 Budget Statement are good avenues for increasing government expenditure.

The same was also true based on the likely impact on agriculture and wholesale and retail sectors. Agriculture constitutes about 3.6 percent of GDP, while the wholesale and retail trade which constitutes about 14 percent of GDP. Since some wholesalers and retailers reduced their fuel consumption by an average of 27 percent, this is likely to reduce their mobility and hence their trade volumes. The fact
that the average expenditure on fuel by the wholesalers and retailers increased by about 6 percent following the subsidy removal could also imply that the business is less profitable, which might scare away other potential entrance.

The same analogue was true for farmers, as some of them reduced their consumption of diesel by an average of 40 percent, which could result in reduced acreage and hence output. This was also worsened by the fact that the removal of the subsidy saw the costs of fuel as a proportion of total costs increasing by about 7 percent. This might also discourage some farmers and hence impact negatively on output.

Thus if the government fails to use the savings from the subsidy wisely, a fall in GDP would be bound to be registered in 2013. However, there is a lot of scope for government to intervene wisely in the market. The fact that the subsidy actually took more resources than what was allocated to social protection gives the need for increasing social protection funding. An indication to increase social protection allocation and spending has been initiated.

Given the negative impact on the poor, priority should be given to projects where such spending would make a difference on the lives of the poor, which include health and education. Thus there is need for strategic mitigating measures to compensate for the loss to the poor. This can include targeted cash transfers and free education and health as well as facilitating the facilitation of a more efficient bus transportation system for public transportation. The implementation of measures identified in the 2014 National Budget Statement, thus, is important.

The reform process was not adequately managed, if international best practice is anything to go by. There does not appear to have been a comprehensive reform plan, which would have spelt clear long term objectives on the removal of the subsidy, to enable stakeholders to measure whether the
reform would be a success or not. Such a plan should have been shared with all the stakeholders to ensure transparency in the whole process. Related to this, the removal of the subsidy should have been preceded by a thorough study on likely impact which would have served as an input into the mitigating strategies. This does not appear to have been done.

Results from stakeholder consultations reveal that there was little support for the reforms from most of the stakeholders, as the majority are not happy about the reforms. This could have been avoided had a clear communication strategy been mapped out prior to the subsidy removal, which would also have seen government winning support for the reforms. Thus it was critical to consult widely with all stakeholders for their input into the issue that is central to their welfare. Stakeholders from business, civil society and consumers do not appear to have been consulted during the exercise. Consultations would have given the opportunity for a win-win situation and democratised the process, which might have probably resulted in a gradually implemented subsidy removal programme with minimum impact on stakeholders.

Now that the measures have already been introduced, reversal of the decision might not be to the best interest of all stakeholders in Zambia. Although some stakeholders are still calling for the reversal of the decision, the economic system appears to have adjusted well to the subsidy removal, as revealed by the stabilisation in inflation.

In addition, the subsidy was already proving to be unsustainable, given the pressure it was putting on government resources. The government was already struggling with a fiscal deficit, which stood at 2.9 percent of GDP in 2012. Expenditure on the fuel subsidy had grown from only 0.1 percent of GDP in 2010 to about 0.7 percent in 2012. The unsustainability of the fuel subsidy was also reflected on the expenditure on the subsidy as a ratio of total revenue; this
had increased from only 0.7 percent in 2010 to about 3.6 percent in 2012. Thus on the economic front, the subsidy removal can be justified. What needs to be adequately managed is the social front, where mitigation is called for.

It is also not too late for government to engage stakeholders and explain what it intends to do to ensure that the negative effects of the subsidy removal are contained. Thus dialogue with stakeholders is still called for, where government can also try to seek buy-in and cooperation while the transition from a subsidised regime to one towards rule-based price mechanism is taking place.

**Recommendations**

The following recommendations can be made based on the findings of this study:

- There is an urgent need for policy response to the negative effects that the removal of the fuel subsidy had in the economy. The government needs to ensure that the safety nets that were announced in the 2014 National Budget Statement are urgently implemented, while seeking for additional measures to compensate the poor households from the losses they suffered as a result of the inflationary pressures emanating from the subsidy removal. Civil society can also complement government by monitoring the extent to which the government would commit itself towards the measures identified under the budget statement;

- There is need for a fiscal response in the form of an expansionary fiscal policy to ensure that economic growth is enhanced. Such as expansionary policy would compensate for the loss in GDP that would arise from a decrease in consumption by households, which also affected business performance;
• While there was an omission in terms of awareness generation and seeking of buy-in from stakeholders before the reforms were introduced, such a move is still called for. Most stakeholders are still bitter about the development and are still in the dark about the positive effects arising from the issue. Civil society organisations can play a more meaningful role in ensuring that stakeholders appreciate the need for the reforms and how best they can manage the situation;

• While the government has identified some ways in which they could respond through social programmes, it is important for the civil society organisations to take a lead in ensuring that the programmes are designed to ensure that the poor households get the most out of them. This can be done by identifying priority areas for government support and mobilising the beneficiaries to actively participate in the programmes;

• There is also need for a strengthened advocacy agenda aimed at ensuring that government would avoid taking drastic measures without prior awareness generation and buy-in in future. The government needs to be sensitised about the negative effects of the subsidy reforms and how best the damage could have been minimised. There are always possibilities that the subsidies could be re-introduced in future in response to future economic hazards, which makes it important that government appreciates shortcomings under the current approach.
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Endnotes

1 This was also affected by the income category classification in the questionnaire

2 Note that the categories are only the authors’ categories and are not based on any standard classification

3 Speech by the Minister of Energy and Water Development to the National Assembly on the Removal of the Subsidy on Fuel, July 2013

4 2013 UNDP Human Development Report


6 National Energy Policy, 2008

7 Statement by the Minister of Finance on the removal of Maize and Fuel Subsidies, May 29, 2013

8 2013 National Budget Speech

9 Statement at the Conclusion of the IMF Mission to Zambia, September 2013

10 Supra Note 2

11 Under the national income identity, GDP = C + I + G + (X - M), where GDP is gross domestic product, C is consumption, I is investment, G is government expenditure, X represent exports while M are imports. A fall in I which is compensated by an increase in G would thus be expected to restore GDP to its current level.

12 Based on CSO figures for 2011 and 2012, released in the August monthly bulletin
References


