

Global Stock-Take of Fuel Subsidies and Pricing Policies

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Abstract

Oil price increases that began in late 2020 led to a global proliferation of liquid fuel subsidies and price controls as governments tried to reduce, redistribute, or delay the impact of rising and volatile energy prices on consumers. This paper draws on a unique database to analyze the petroleum product pricing regimes and consumer price subsidies implemented in 154 economies since 2021. The results indicate that currently a majority of countries regulate fuel prices. Of the 154 economies examined, less than half had deregulated fuel prices as of January 2025. In all, 45 percent of the economies that regulate fuel prices have frozen prices for months and, in some cases, for years. Such infrequent price adjustments, common in Sub-Saharan Africa and in the Middle East and North Africa, lead to significant market distortions, including fuel shortages, smuggling, and unsustainable subsidy costs. Pressure on governments to intervene in the fuel markets surged in 2022 following the spike in international oil prices. In response, 132 of the

154 governments studied instituted a form of fuel price control or subsidy measure in 2022: 59 governments provided direct fuel subsidies, 61 cut fuel taxes, and 41 froze fuel prices entirely. Overall, 29 governments implemented both tax reductions and price subsidies in 2022. A few countries that had deregulated fuel prices prior to 2022 ended up reregulating prices. As of January 2025, 14 countries continued to maintain the 2022 fuel tax reductions. Additionally, fuel prices remained unchanged in several countries over this period. As of January 2025, at least 16 economies were implementing subsidy reforms, while nine others were considering reforming their existing subsidies in the coming years. These economies can benefit from the lessons learned from previous episodes of rising oil prices as well as those from recent international experience, which are documented in this paper and the two new World Bank global databases developed for this study.

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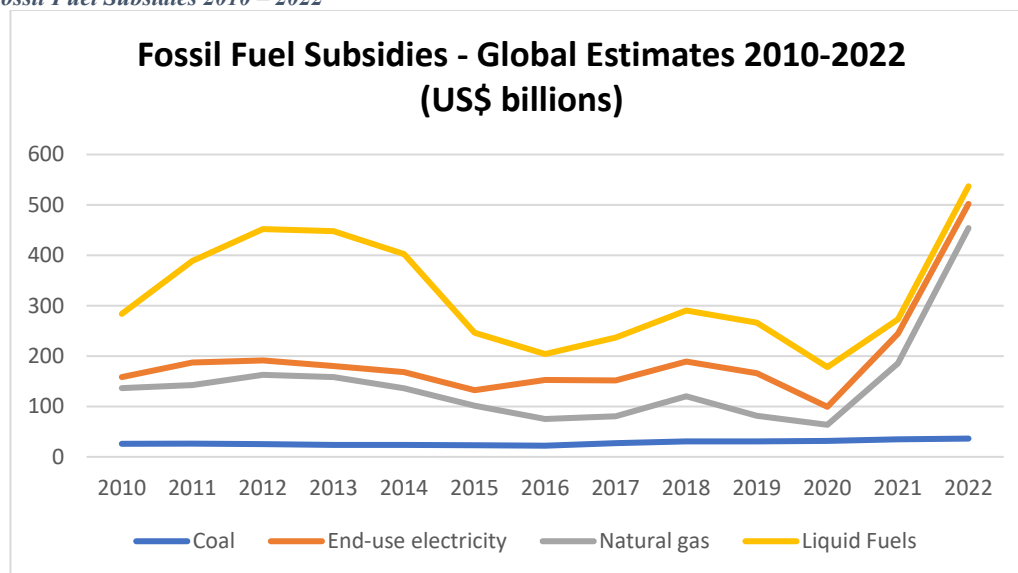
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1 Introduction

Oil prices have been increasingly volatile since 2004, with several instances of sudden spikes in prices followed by ebbs (Figure 2). Between December 2020 and June 2022, oil prices rose by 118 percent (in real terms)¹ as economic recovery from COVID-19 led to a rebound in energy demand across the globe in 2021 while supply remained constrained. The Russian invasion of Ukraine in February 2022 exacerbated these trends, leading to significant increases in energy commodity prices throughout 2022. Prices have come down from the 2022 highs but remain elevated due to a range of geopolitical, macroeconomic, and sectoral factors. This most recent spike in oil prices (Figure 1) has led to a global proliferation of liquid fuel² subsidies and price controls as governments tried to reduce, redistribute, or delay the impact of rising and volatile energy prices on consumers—but these come with significant risks. In parallel subsidies on natural gas and electricity have also increased.

Figure 1: Fossil Fuel Subsidies 2010 – 2022



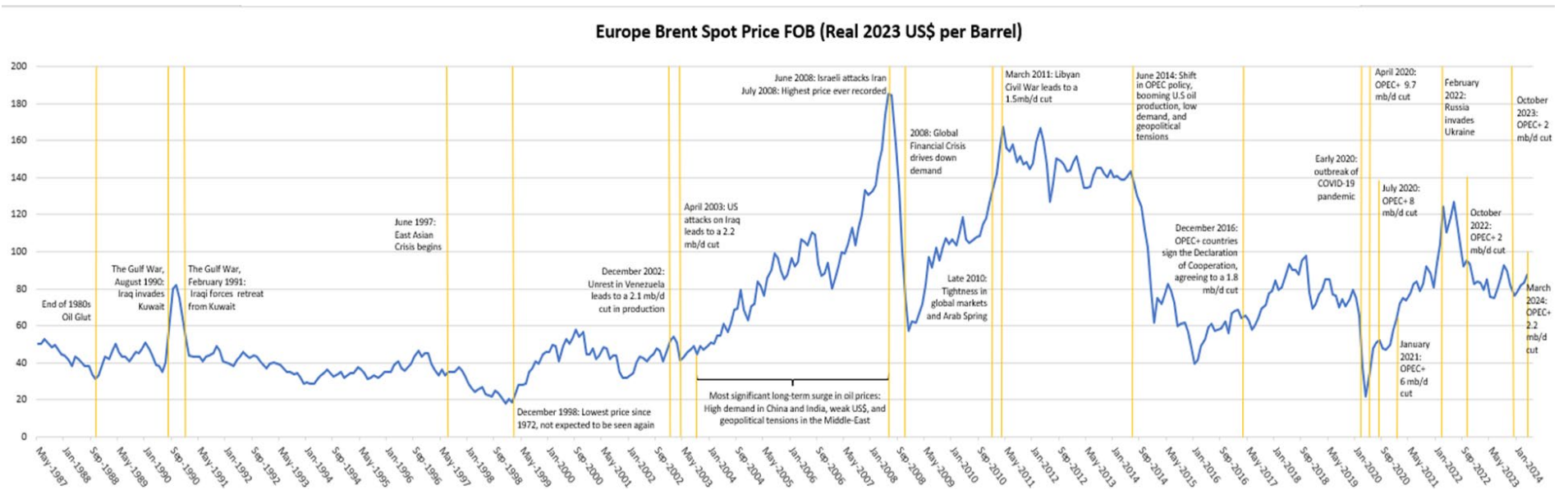
Source: [Fossil Fuel Subsidy Tracker](#)

Fuel subsidies entail any deliberate policy action by the government that results in one or more of the following effects: (i) reduces the net cost of fuel purchased; (ii) reduces the cost of fuel production or delivery; (iii) increases the revenues retained by those engaged in fuel production and delivery (Kojima 2017). Production subsidies are more prevalent in upstream oil production to attract investments. Some governments also provide subsidies to domestic refineries to enable them to compete with cheaper imports, often through direct fiscal transfers or subsidized fuels for refineries. Consumption subsidies, on the other hand, aim to keep prices lower for end-users by reducing taxes or offering price controls.

¹ Throughout this paper, prices in local currency units (LCU) are converted to US\$ and adjusted for inflation to reflect their real value in 2023 dollars. Prices in LCU are converted to US\$ using the average exchange rate for the relevant year. The Consumer Price Index (CPI) is utilized to express the US\$ values in real terms for 2023. CPI data is obtained from Federal Reserve Economic Data (FRED), specifically for the CPI for All Urban Consumers: U.S. City Average, Monthly, Seasonally Adjusted. The average CPI for both the base year and the target year is calculated. The real US\$ value for 2023 is determined by adjusting the US\$ value for inflation based on the calculated inflation rate. This consistent approach ensures that all prices presented in the paper accurately reflect their real value in 2023 dollars.

² Liquid fuels include petroleum products such as gasoline, diesel, kerosene, Liquid Petroleum Gas (LPG), Heavy Fuel Oil (HFO).

Figure 2: Brent Crude Oil Spot Price 1987-May 2024 (2023 US\$)



Oil prices rose significantly in 2022 and have fluctuated since as a result of several factors. First, global oil trade routes shifted. The Russian Federation’s invasion of Ukraine in 2022 led to significant shifts in the global oil markets due to a number of oil sanctions imposed on Russia. Prior to the war, Europe was Russia’s main export market both for crude and refined oil products, especially diesel. Immediately after Russia’s invasion of Ukraine, several Western countries started to reduce their purchases of Russian oil. This was followed by European Union (EU) embargoes on oil imports and price caps coordinated by the G7, Australia, and the EU that came into force in late December 2022 and early February 2023. The sanctions on Russia and the imposition of G7 price caps significantly altered global oil trade flows, forcing Russia to find alternative markets to its traditional buyers in the EU, United States, and the Republic of Korea, with Türkiye, India, and China soon emerging as the top three importers of refined products (Figure 3).

Figure 3: Shift in Russian oil product exports January 2022 vs September 2024



Transportation costs rose during this period. The rerouting of shipments in the global oil market has come at a significant cost. Oil exports are over longer distances, from Russia to India and China and from the United States, Africa, and the Middle East to Europe, increasing freight costs. Ongoing geopolitical tensions in several regions are continuing to impact trade routes. For example, Red Sea shipping volumes have declined by more than 60 percent since November 2023 as vessels are choosing the longer Cape route to avoid Houthi attacks. Shipping companies such as Maersk and Cosco have announced that into 2025 they will use the longer route via the Cape of Good Hope instead of the Suez Canal for shipments, including oil cargo.

Oil prices moderated in 2024 as supply expectations outpaced demand. Crude futures prices significantly came down by the latter half of 2024, as supply expectations outpaced demand forecasts. Non-OPEC crude production rose in 2024, especially in Brazil, Canada, Guyana, and the United States. On the demand side, slowing economic growth, especially in China, has reduced the expected need for crude in the near term.

Dated Brent in September 2024 stood at its lowest level since June 2023. The World Bank expects Brent prices to average US\$80 per barrel in 2024 and decline to US\$73 per barrel in 2025 and US\$72 in 2026 (World Bank 2024a).

In response to the surge in oil prices in 2022, many countries introduced, expanded, or reintroduced previously eliminated broad-based, untargeted fuel subsidies to protect consumers. In countries where there were existing subsidy programs, the costs of these programs rose with commodity prices, requiring governments to increase the allocation in the budget or withdraw from price stabilization funds to finance rising subsidy costs. A number of governments have (i) reversed subsidy reform policies, (ii) delayed planned subsidy reforms, or (iii) introduced price subsidies for the first time.

The International Energy Agency (IEA) estimated that global fossil fuel consumption subsidies exceeded US\$1.2 trillion in 2022 (IEA 2023). A World Bank study published in 2023 found that between 2021 and 2023, at least 65 economies implemented 84 measures to reduce fuel prices, either by fixing or partially subsidizing them. The analysis estimates that these measures collectively cost close to US\$89 billion and benefited 18 million individuals (Gentilini et al. 2023). However, in 2023, as oil prices declined, global fuel subsidies fell to US\$620 billion, nearly half of their 2022 level, according to the IEA.

The numbers above highlight the immense fiscal burden energy subsidies impose on governments, diverting resources away from crucial development priorities and increasing debt sustainability risks, particularly in low- and middle-income countries where the high cost of subsidies can increase economic inequality and hinder long-term growth. In both developing countries and advanced economies, fossil fuel subsidies often crowd out spending on other vital public services, such as health care, education, and infrastructure (Mahdavi et al. 2022). For example, in Kazakhstan, government spending on fuel subsidies is nearly three times higher than on health or education, even though investments in these public services tend to be more equitable and directly benefit lower-income groups (Damania et al. 2023).

The expanded or newly introduced subsidy programs create an additional burden on governments amid tightening fiscal space and spending pressures from other priorities. Continuation of these new measures for extended periods in the event of persisting price pressures would require substantial additional fiscal resources and could pose serious risks to fiscal sustainability. A subsidy once introduced can be difficult to phase out, suggesting the need for caution in introducing “band-aid” measures that may have unintended and counterproductive consequences. Faced with mounting fiscal costs, a few countries are currently re-evaluating their subsidy policies.

As governments grapple with tough choices in the coming years to protect the poor and the vulnerable, it is important to take stock of global experience, both past and present, with fuel subsidies. As the volatility in oil price movements continues to test governments’ resolve for resilient and inclusive development, providing the right price signals to the energy consumers while protecting the vulnerable will be an essential piece of the puzzle.

Currently, there is no single source of comprehensive data and information on the types of fuel pricing mechanisms, fuel subsidies, and fuel market conditions across countries. To fill this data gap, the author developed the [Global Fuel Subsidies and Price Control Measures Database](#). This database provides information on: (i) each country’s oil sector, including crude oil and refined fuel product trade status and the total domestic refining capacity; (ii) the type of fuel pricing regulation implemented in the country; (iii) domestic fuel market conditions (such as fuel rationing, smuggling, and shortages); (iv) type(s) of fuel subsidies implemented in the country; and (v) whether the country is undergoing or considering fuel pricing reforms. It provides these data for 154 economies annually from 2021 to 2025.

This paper utilizes the new global database to examine the following questions:

1. What types of fuel price controls and subsidy policy measures have been used by governments in response to global oil price fluctuations since 2021?
2. Which price controls and subsidy measures were more easily phased out compared to others that proved to be difficult to reduce and eliminate?
3. What types of challenges do countries face as a result of non-cost-reflective fuel prices (for example, fuel shortages, black markets, and smuggling)?
4. What patterns emerge from countries that have reformed or are in the midst of reforming fuel subsidies and price controls? Are there common characteristics or strategies that could serve as best practices?

Drawing from past experiences and current reforms, the paper consolidates insights into what has worked and what has not, offering actionable recommendations to help governments develop smarter and more resilient fuel pricing policies. The paper is structured as follows: Section 2 provides a literature review. Section 3 describes the new global database developed for the purposes of this paper as well as summarizing the data collection methodology. Section 4 provides a global stock take of different methods countries utilize to determine fuel prices. Section 5 presents the global landscape of various types of fuel subsidies instituted by governments since 2021. Section 6 examines the current state of fuel subsidy reforms and distills key recommendations for countries currently considering such reforms. Section 7 summarizes the key insights and concludes.

2 Literature Review

Various countries have historically justified fuel subsidies to achieve several objectives such as ensuring economic stability by mitigating global price volatility and inflation, supporting energy independence through promoting local fuel production, and maintaining competitiveness by keeping fuel prices low for energy-intensive industries. Some governments also see subsidies as a tool to improve fuel affordability for households and reduce reliance on more polluting energy sources such as wood for cooking (Rentschler and Bazilian 2017).

Past global experience has shown that universal fuel price subsidies—untargeted price controls or tax reductions—do not help the poor as intended and are harmful to public finance, the energy sector, and the environment. However, they are administratively simple – they are easy to implement, requiring no complex targeting mechanisms or social protection systems. Governments that encounter challenges identifying and reaching vulnerable populations often resort to universal subsidies. That said, broad-based, untargeted fuel subsidies come with significant drawbacks. They:

- incentivize consumption and production of fossil fuels, harming the environment and climate (IISD 2021);
- create distortions in the economy by maintaining artificially low energy prices (Kojima 2017), sending wrong signals to consumers, disincentivizing behavior change, and discouraging new investment in cleaner alternatives;
- are almost always regressive, benefiting the rich far more than the poor (Coady et al. 2015); and
- have a compounding fiscal impact (Gooptu 2018), which may not be fully captured in budgets when delivered through state-owned energy companies, or tax expenditures, which are not scrutinized by the parliament in most countries.

The World Bank's Energy Sector Management Assistance Program (ESMAP) analyzed real-world experiences and strategies for reforming energy subsidies, offering practical insights on how developing countries can move from merely aiming to reform subsidies to effectively implementing change (Gencer and Arizu 2024). Despite the well-recognized negative impacts, the reform process remains highly complex. One key challenge identified by Gencer and Arizu (2024) is that subsidies, over time, become deeply ingrained in the economy, creating a dependency among households and businesses. This makes subsidy removal or reform politically risky, even when the original rationale for the subsidies no longer applies.

A recent study of 12 middle-income countries, which together provided over US\$750 billion in subsidies in 2022, found that public support for subsidy reforms remained low, with fewer than a third of respondents willing to accept higher fuel prices without compensatory measures. However, support for reform grew significantly when subsidies were linked to investments in public services like health care, education, and infrastructure (World Bank 2023). This finding highlights the potential for more politically viable and sustainable subsidy reforms when they are tied to broader public benefits.

Another factor complicating subsidy reforms is the high volatility of international oil prices. Sharp fluctuations in oil prices often prompt governments to adjust subsidies—either increasing them to shield consumers from rising costs or scaling them back when prices fall (Inchauste and Victor 2017; Kojima 2016). Gencer and Arizu (2024) highlight that many fuel subsidy reforms are triggered by such external shocks, like the 2020 oil price crash during the COVID-19 pandemic. While these shocks may provide a brief window for reform, they also heighten economic hardships, leading to greater resistance from households and businesses. Consequently, subsidy reforms are often met with significant political challenges.

International experience shows that fuel subsidy reform is not a one-size-fits-all process. Successful implementation depends on a thorough understanding of the economic, fiscal, and social impacts, as well as the political and sectoral dynamics at play. Factors such as the design and objectives of the reform, as well as the broader macroeconomic and political context, significantly influence the outcomes and long-term sustainability of these reforms.

Recent studies provide valuable insights into the key elements for success. Atansah et al. (2017), in their analysis of LPG subsidies in India, the Islamic Republic of Iran, and Nigeria, emphasized the importance of clear communication and proactive public engagement before implementing price increases. They found that gradual adjustments, targeted cash transfers for low- to middle-income households, and favorable macroeconomic conditions were critical for sustaining reform. Similarly, Skovgaard et al. (2024) suggested that to advance the global phase-out of fossil fuel subsidies, countries should replace broad-based price subsidies with more targeted measures, such as cash transfers, which have proven successful in G-20 and OECD countries. In a broader analysis of fossil fuel subsidies across 13 countries, Whitley and van der Burg (2015) recommended a whole-of-government approach, stressing the need for comprehensive pre-reform research on existing subsidy systems and their potential impacts. They also emphasized transparent communication, extensive stakeholder consultation, and a clear, phased timetable for subsidy reductions, alongside visible reallocation of resources to support the most vulnerable groups. Together, these studies highlight that successful fuel subsidy reforms require careful design, transparent communication, and gradual implementation to ensure long-term effectiveness and public support.

International institutions play an important role in providing frameworks and tools to guide governments through the complexities of subsidy reform. The United Nations Development Programme (UNDP), for example, developed guidelines on fossil fuel subsidy reform policies, offering insights into good practices, lessons learned, comparative advantages, and the distributional impacts of such policies (UNDP 2021). The

Energy Subsidy Reform Assessment Framework (ESRAF), developed by the World Bank’s ESMAP, offered step-by-step guidance on subsidy reform, underscoring the importance of clear communication, gradual implementation, and targeted compensation. Additionally, the International Energy Agency (IEA) contributed by providing yearly data from its fossil fuel database, which has been essential in demonstrating the economic and environmental benefits of subsidy removal (IEA 2023). IRENA also played a key role through its research reports, highlighting how shifting subsidies to renewable energy can promote long-term sustainability (Taylor 2020). These frameworks, developed by international organizations, have provided governments with helpful tools to design effective subsidy reforms that are context-specific and sustainable.

This paper builds on the work by Kojima (2016), whose analysis examined fossil fuel subsidies in developing countries where price subsidies persisted. Kojima examined the responses of 35 governments to the sharp decline in global oil prices in 2014 and the subsequent rise in 2015,³ finding that many governments that implemented subsidy reforms failed to adjust domestic fuel prices in response to the rebound in global oil prices. The study emphasizes that regular, small price adjustments are essential for helping both governments and consumers manage fluctuations in global fuel prices. Conversely, freezing prices—even temporarily—increases the likelihood of reverting to inconsistent pricing practices and reintroducing subsidies. Kojima (2016) recommends that a clear and consistent shift toward market-based pricing, supported by frequent price adjustments and transparent communication, is critical for the long-term sustainability of fuel pricing reforms.

3 New Global Fuel Subsidies and Price Control Measures Database

This paper draws on a new database developed by the author for the purposes of this paper. Utilizing the [“Global Fuel Subsidies and Price Control Measures Database”](#)⁴ this paper analyzes the fuel pricing regime and types of fuel subsidies implemented across 154 economies since 2021 and provides updated recommendations on cost-effective options for achieving these policy objectives.

The qualitative database provides information on (i) each country’s oil sector, including trade status and number of refineries in operation as well as total refining capacity; (ii) type of fuel price regulation implemented in the country; (iii) certain domestic fuel market conditions (such as fuel smuggling, shortages); (iv) type of price controls and subsidies on fuels in the country; and (v) whether the country is undergoing or considering reforms. The database includes a comprehensive classification of fuel pricing mechanisms, fuel-related issues, price control measures, and subsidy reforms across 154 economies. The qualitative analysis of these classifications allows for a deep understanding of how fuel pricing practices and subsidy reforms have evolved over the past few years in response to global oil price fluctuations.

The data were collected by the author using publicly available sources including websites of the ministry of energy, ministry of finance, central bank, petroleum regulatory authority, international sources (e.g., International Energy Agency) and local and international news articles. The search was conducted in both English and in the local language(s). The database only covers consumption subsidies. Production subsidies provided for upstream oil production and exploration are not covered as these are often hidden subsidies and very difficult to identify. The database covers the period 2021 to early 2025 and will be maintained on

³ This included examining cases where reform had not started due to the fall in prices or cases where reform had started but had been abandoned due to the oil price bounce-back in 2015.

⁴ The analyses in this paper are based on the February 2025 version of the database.

an annual basis going forward to add to the global knowledgebase on fuel subsidies and pricing mechanisms. The current geographic coverage of the database is provided in the Appendix.

4 Regulating Fuel Prices – The Global Landscape

As long as there is adequate competition in the fuel market, there is no reason for fuel pricing to be regulated by the government. However, out of the 154 economies studied by this paper, only around 60 have deregulated⁵ fuel prices. In these countries prices are driven by market forces while a regulatory agency monitors the fuel sector to ensure prices reflect market realities. Prices are deregulated predominantly in more advanced economies. As of January 2025, only ten countries with deregulated fuel prices have some form of official fuel subsidy while nineteen additional countries had fuel tax breaks, these are primarily targeted measures. For example, Germany and Poland have tax breaks on diesel for agricultural usage. Farmers rely on diesel for many types of machinery and are reimbursed part of the excise duty on diesel in these countries. A few countries with historically deregulated fuel prices re-regulated prices in 2022 to mitigate the impact of rising oil prices over a prolonged period of time or a sharp increase in price.

In the face of rising global prices, a few countries that had deregulated fuel prices reintroduced a form of fuel price regulation in 2022. Some countries only kept the price regulation in place for one year while others continue to regulate prices in 2025.

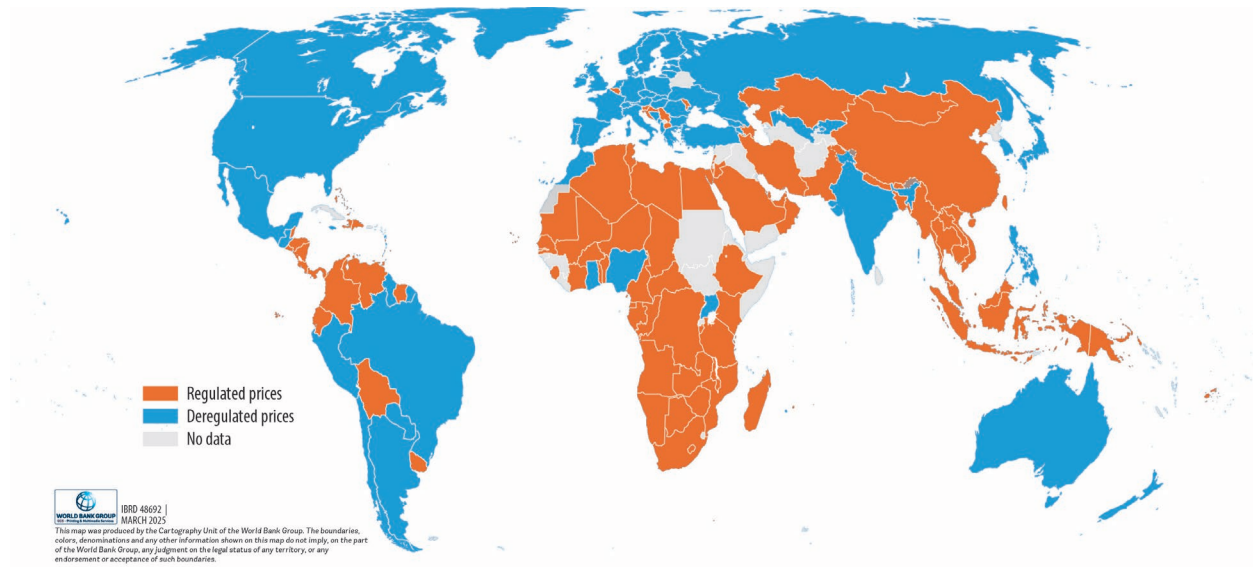
- ❖ ***Example of temporary fuel price regulation - Albania:*** Retail fuel prices rose by 35 percent between January and March 2022 in Albania. The government, concerned about rising prices and facing public protests on rising energy costs, reregulated fuel prices on March 5, 2022. The government instituted a fuel pricing formula and introduced a 12-member fuel price review board (the "Transparency Board") to review fuel prices weekly. The methodology for calculating the formula was transparently reported on the Ministry of Finance's website. The Transparency Board set price ceilings from March 2022 until June 7, 2023, when it was abolished, and the country reverted to deregulated prices.
- ❖ ***Example of temporary fuel price regulation extended multiple times - Serbia:*** In February 2022, the Serbian government started temporarily regulating fuel prices on a weekly basis. The government passed a decree allowing the government to set a price cap on diesel and gasoline initially for a 30-day period, which was extended multiple times. As of January 2025, the Ministry of Foreign and Domestic Trade continues to announce weekly fuel price caps for gasoline and diesel.
- ❖ ***Example of temporary fuel price regulation that is being phased out - Slovenia:*** The Slovenian government started regulating fuel prices in March 2022 by setting a price cap on gasoline and diesel and updating it every 14 days. Initially, all petrol stations in the country had to adhere to the caps. In June 2022, the government introduced a targeted approach by deregulating the prices of motor fuels sold along motorways but keeping price caps for the fuels sold at service stations outside motorways. The government currently sets price caps on gasoline and diesel every 14 days for petrol stations outside motorways, while keeping service stations along motorways deregulated. This price differentiation is a form of implicit targeting, whereby motorists with higher willingness to pay can purchase fuels on the highway at prices closer to market rates, whereas consumers with

⁵ Some countries deregulate certain fuels but regulate others. In this paper a country is considered as having "deregulated" fuel prices if both diesel and gasoline (of all grades) are deregulated. In some cases (e.g., Ghana where premix fuel is regulated) other fuels may still be regulated. If a country regulates either gasoline or diesel but deregulated one of these or any other fuels, they are considered as "regulated".

a lower willingness to pay can access cheaper fuel by refueling at service stations off the motorways, although at the cost of a slight detour.

Of the 154 economies studied by this report, less than half have deregulated fuel prices as of January 2025 (Figure 4). The type of fuel price regulation varies significantly within this group of countries. This section provides an overview of the types of fuel price regulation adopted by countries globally and how countries adjusted their regulation in the face of recent spike in fuel prices.

Figure 4: Fuel Price Regulation - Global Landscape in January 2025



Source: "[Global Fuel Subsidies and Price Control Measures Database](#)" (World Bank 2025)

Note: Some countries deregulated a few fuels but regulate others. There are also countries where only one or two fuels are regulated. In the database a country is coded as “deregulated” if both diesel and gasoline (of all grades) prices are deregulated. In some cases (e.g., Ghana where premix fuel is regulated) other fuels may still be regulated. If a country regulates either gasoline or diesel but deregulated one of these or any other fuels, they are listed as “regulated”. In a few countries (e.g., Canada) some provinces regulate fuel prices, but others do not. A country is classified as deregulated if there is no price regulation by the central government.

4.1 Regulated price levels and price caps

Under fuel price regulation the government through a ministry or an agency sets fuel prices in the country typically through a formula. Some governments set **price levels** while others set **price caps**. Both price levels and caps can be set anywhere along the fuel supply chain. Setting price levels or caps upstream is preferable as there is likely to be limited competition between fuel importers and refiners. There is likely to be more scope for competition at the retail level, thus regulating fuel prices at the retail level can be an inhibitor to retail competition.

As of January 2025, 56 economies primarily set fuel price levels while 38 set price caps. Algeria, Costa Rica, and Zambia set fuel price levels at the retail level which means that retailers in the country cannot deviate from the prices set by the government. By contrast, Belgium, Cabo Verde, and Cambodia are examples of countries that set retail fuel price caps in which case retailers can charge any price as long as they are below the official regulated cap. Price caps are more suited to fostering competition than price levels. The degree of deviation from the price ceilings can be used as a measure of emerging competition in the fuel market. Several countries have transitioned out of regulated price levels to price cap regulation

to promote competition in the fuel sector. However, it takes time for competition to emerge, and it is not unusual for all retail prices to be at the price ceilings. In some cases, price caps are set at such low levels that retailers either break even only at the cap or even at the cap are making losses. Lack of competition among retailers in the domestic fuel market can also induce all retailers to set prices at the cap.

Among countries that regulate prices there is variation in the geographic coverage of fuel prices. Around 50 economies set *pan-territorial* price levels or caps. In majority of these countries the price levels themselves are regulated rather than price ceilings, thus legally no variation in fuel prices is allowed across the country. The larger the area covered by a single price, the greater is the degree of government intervention in the fuel market and the less cost-reflective the price. A uniform price across a large territory disregards the wide range of transportation and storage costs of delivering fuel to different parts of the country. Countries that follow pan-territorial pricing need to settle transportation cost differences across their territory otherwise this policy is ripe for black marketing of fuels (e.g., Central African Republic).

Most countries that regulate fuel prices set levels and caps that vary by regions to take into account cost differences of supplying different areas in the country. For example, Botswana sets gasoline, diesel and kerosene prices individually for 88 cities in the country while Tanzania sets 168 location-specific price caps. The South African gasoline prices are zonal, different prices are posted for different zones (coastal and inland regions) to take into account differences in logistic costs of supply. In a few countries prices of some fuels have pan-territorial pricing while other fuel prices vary by region. For example, Belize sets uniform gasoline and diesel price caps across the country, but price caps for bottled liquefied petroleum gas (LPG) are set by region. Belize’s LPG pricing policy takes into account the fact that transporting and storing bottled LPG is much costlier than for gasoline and diesel.

Most countries with regulated fuel prices review and adjust them on a periodic basis. Currently, at least 21 countries update fuel prices on a weekly basis, 28 do so on a monthly basis, and 3 countries update prices every quarter. The practice of changing prices regularly and frequently introduces discipline and makes consumers more accustomed to price adjustments. While price stability has certain attractions, the global experience suggests that acquiring the habit of changing prices takes time.

The longer the period for adjusting prices the higher the risk that domestic prices start departing from international price movements. One significant disadvantage of infrequent price changes is that when prices are finally adjusted, the adjustments tend to be large, thereby increasing public resistance to price adjustments and pricing reform. Forty-three countries freeze fuel prices for long stretches of time, sometimes for years, a majority in Sub-Saharan Africa (Table 1). Freezing fuel prices for long stretches of time leads to significant distortions in the fuel market and ballooning of subsidies.

Table 1: Economies with Regulated Fuel Prices in 2025 – Frequency of Price Revisions

Frequency of Fuel Price Adjustments	East Asia & Pacific	Europe & Central Asia	Latin America & the Caribbean	Middle East & North Africa	North America	South Asia	Sub-Saharan Africa	TOTAL
Weekly	5	7	5	1	0	3	0	21
Monthly	4	0	10	3	0	1	10	28
Every 3 months	0	0	1	0	0	0	2	3
Prices frozen for more than 3 months	2	2	7	9	1	0	22	43

Source: "[Global Fuel Subsidies and Price Control Measures Database](#)" (World Bank 2025)

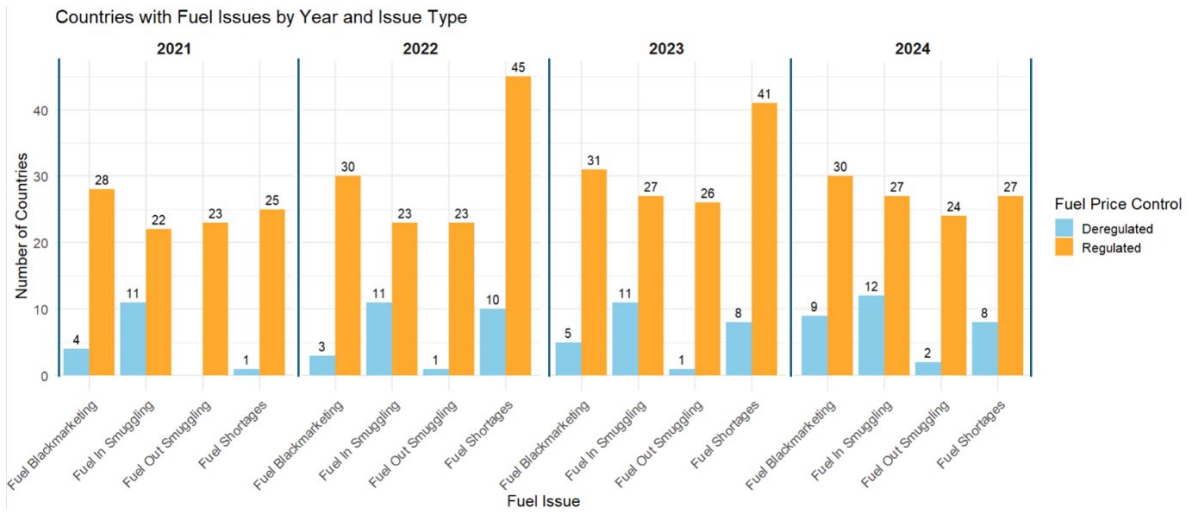
There are many unintended consequences that can arise when freezing fuel prices for long stretches of time, including but not limited to the following.

- ❖ ***Fuel shortages inducing illegal trade in fuels:*** The Central African Republic is fully reliant on imports of refined petroleum products. The government regulates all fuel prices and froze them between January 2016 and January 2023. On January 3, 2023, gasoline prices increased by more than 50 percent, while diesel prices increased by almost 70 percent. The large adjustments were triggered by the severe shortages of fuel products that started in March 2022 as retail prices failed to cover import costs, creating a black market for these fuels. The fuel shortages led to the resale of gasoline under unsafe conditions as it was smuggled in plastic buckets. This illegal practice caused dozens of fires in the capital city and in some towns across the interior of the country.
- ❖ ***Fuel smuggling leading to financial losses for oil producers:*** Algeria is an established oil producer with a significant domestic refining capacity. The prices of liquid fuels are regulated by the government and have been frozen for several years. Gasoline and diesel prices have been frozen since June 6, 2020, while LPG prices have remained unchanged since 2005. As a result, domestic prices do not reflect international oil price dynamics, resulting in the government occasionally making fiscal transfers to the national oil company (Sonatrach) to subsidize prices or off-budget subsidies through foregone taxes, royalties, and dividends from the oil sector. The out-smuggling of subsidized Algerian fuels to neighboring countries remains a recurring issue, especially along the Tunisia border. To address this, the 2025 Finance Bill expands the 2021 fuel tax on outbound vehicles to include buses.
- ❖ ***Domestic oil companies in financial distress resulting in fuel shortages and loss of tax revenue:*** Fuel prices in Madagascar are regulated by the government but prices are not adjusted on a regular basis. Kerosene, gasoline, and diesel prices were frozen from June 2019 until August 2022. Oil distributors were making losses in 2022 as the regulated prices did not cover their costs, resulting in several instances of countrywide fuel shortages. The distributors stopped paying customs duties on fuels to the government, accumulating tax arrears. In May 2023, the government announced it had reached an agreement with the oil distributors to settle their tax payment arrears as well as government arrears to them to cover import costs. The government stated that it would settle these oil tanker liabilities through special treasury bonds included in the 2023 Finance Law.

Overall, countries with regulated fuel prices had more instances of fuel price subsidies, fuel shortages, black marketing, and out-smuggling (Figure 5). In 2022, the number of countries reporting fuel market issues increased compared to 2021. The number of countries reporting fuel shortages nearly doubled in 2022, and 45 countries with regulated fuel prices experienced fuel shortages, of which 25 had frozen fuel prices for months and, in some cases, years (Figure 6). In contrast, only 10 countries with deregulated fuel prices experienced fuel shortages in 2022.

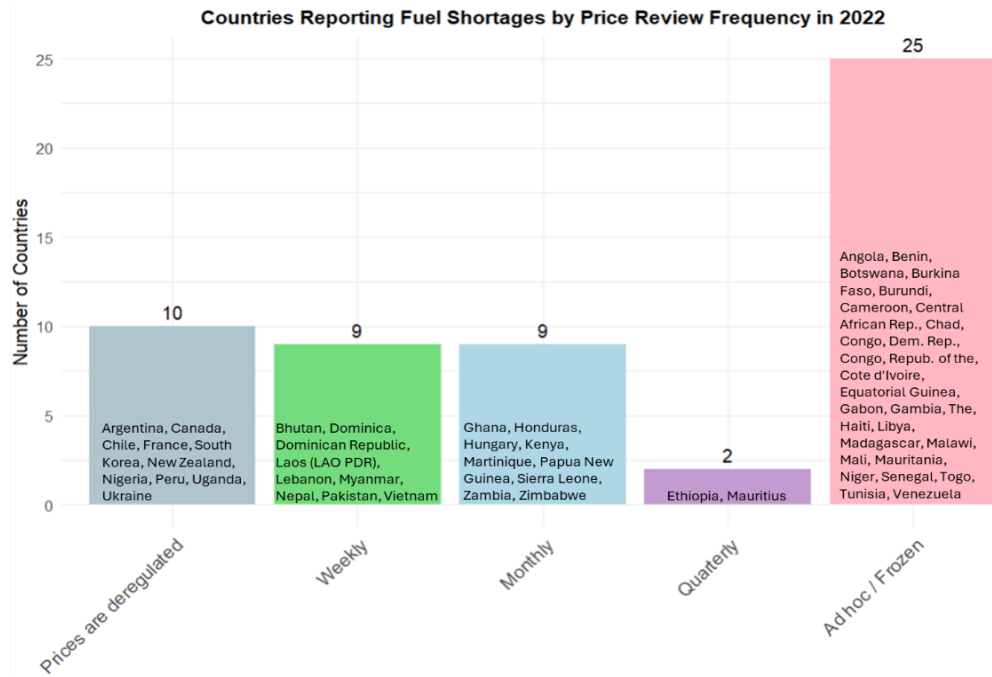
Some countries partially deregulated the fuel market. For example, Ghana in June 2015 deregulated most fuel prices by allowing fuel retailers and importers to set directly their own prices based on import parity costs, taxes, and margins. The government kept price controls and subsidies on premix fuel (gasoline pre-blended with a lubricant used by fishing boats) and residual fuel oil (used mainly by the textile manufacturing industry). Subsidy on these two fuels is paid through a fuel stabilization account, which is collected through special levies on gasoline and diesel. In November 2022 the government stated the fuel stabilization account was not sufficient to cover these subsidies and ended the subsidy on residual fuel oil. Prices on these two fuels remain regulated and premix continues to be subsidized.

Figure 5: Fuel Price Regulation and Fuel Market Conditions



Source: "[Global Fuel Subsidies and Price Control Measures Database](#)" (World Bank, 2025)

Figure 6: Frequency of Fuel Price Updates & Occurrence of Fuel Shortages in 2022



Source: "[Global Fuel Subsidies and Price Control Measures Database](#)" (World Bank 2025)

4.2 Price control mechanisms

There are a range of mechanisms countries utilize to insert a level of control over fuel prices. In 2022, many countries, even ones with deregulated markets, resorted to using such measures to mitigate the impact of rising fuel prices on their population.

Taxes on fuels are typically a critical source of government revenue, especially in developing countries as they are easier to collect compared to other taxes including income taxes. Reduction in fuel taxes was the most prominent measure adopted in 2022 to control fuel prices, 62 economies reduced fuel taxes in 2022.

It was used mainly in Europe and Central Asia (22 countries) but also other parts of the world, with many governments forgoing significant amounts of revenue. Some countries reduced taxes only on certain fuels. For example, Botswana in August 2022 eliminated the tax on LPG temporarily for 6 months. By contrast, Brazil eliminated taxes on all fuels, resulting in significant loss of tax expenditures.

Some countries reduced fuel taxes only temporarily and restored their original tax levels in less than a year. Examples include the following:

- ❖ **Australia:** Australian fuel prices are fully deregulated. In March 2022, the government instituted temporary price control measures by cutting the fuel excise tax by half. The excise tax on each liter of gasoline and diesel sold in Australia was reduced from 44.2 to 22.1 Australian cents. This temporary measure was in place for 6 months. The cut cost about US\$1.92 billion in lost revenue, according to government estimates.
- ❖ **Barbados:** The government regulates fuel prices following a formula. In March 2022, the government reduced the VAT on gasoline and diesel to reduce fuel price increases. The government initially indicated that these policies would be in effect for only 6 months but in August 2022 the government extended the measures to January 31, 2023.
- ❖ **Namibia:** In May 2022 the government temporarily reduced fuel levies on all petroleum products. The measure was initially planned to last 3 months but was extended through the summer. In October 2022, the government restored fuel levies to their original levels.
- ❖ **North Macedonia:** In March 2022 the government reduced the VAT on fuels from 18 percent to 10 percent for two months. In June 2022 the government decided not to extend the measure and VAT was increased back to 18 percent.

Tax reduction measures can be sticky. Several countries that instituted fuel tax reductions in 2022 repeatedly extended these measures. Three examples are given below:

- ❖ **Papua New Guinea:** The government exempted all fuels from import excise duty and Goods and Services Tax (GST) from May 1, 2022. The government initially intended to end the exemption in October 2022 but extended the deadline several times.
- ❖ **UK:** Fuel prices are deregulated in the United Kingdom. In March 2022 the government reduced taxes on fuels. Initially the measure was in effect until March 2023, but was extended for another 12 months to March 2024, when the government extended the fuel tax cut for another year to March 2025. It was again extended in February 2025 till March 2026.
- ❖ **Viet Nam:** In 2022, the government reduced the environmental protection tax three times between January and July 2022 to mitigate rising domestic prices. The finance ministry estimates these cuts reduced the tax revenue in 2022 by US\$1.44 billion. The government has maintained the fuel tax cuts in 2023 and 2024. They stated they would be maintained until end of 2025.

Import duties on crude oil and petroleum products are another important source of fiscal revenue. Aside from Papua New Guinea above, other governments sacrificed this revenue source in 2022 to mitigate domestic fuel prices:

- ❖ **Argentina:** In 2022 the government authorized Cammesa, operator of the wholesale power network, to increase the amount of diesel it could import under a tax-free scheme to 25.2 million barrels from 15.7 million barrels. This policy was used to mitigate pressure on power tariffs as diesel demand for electricity generation grew faster than previously expected while international oil prices spiked at the same time.
- ❖ **Bolivia:** In January 2022, government issued a decree that eliminated import tariffs on crude oil to improve the economics of domestic refineries. This policy remains in force in 2025.
- ❖ **Grenada:** In September 2022, the government removed all taxes and import duties on petroleum products. These were reinstated in full in January 2023.

In regulated fuel markets it is easy for the government to assure the tax and import levy cuts are passed on to the end-consumer price as these are elements within the fuel pricing formula used by petroleum agencies to calculate price levels or caps in the country. In deregulated markets the government has less control over whether oil retailers pass through these savings on to fuel consumers. A recent study of the German tax reduction on gasoline and diesel that was in place for 3 months over the summer of 2022 finds that the gasoline tax reduction was completely passed on to consumers, but diesel tax savings were only partially passed through (Dovern et. al. 2023).

Overall, temporary fuel tax and import duty reductions were one of the less distortive mechanisms for the domestic fuel market while providing some relief to domestic consumers by buffering them from a sudden spike in international oil prices. This is because fuel pricing deregulation as a policy or pricing formula based on efficiently incurred costs could remain in place while governments adjust tax and other fee rates. Among the 32 countries in 2022 that instituted only fuel tax reductions, import duty reductions, or both without relying on universal fuel subsidies, only seven had brief instances of fuel shortages in 2022. In four cases the fuel shortage was either due to technical issues⁶ or due to labor action by oil transporters. The other three cases were due to difficulties accessing foreign exchange.

Despite growing domestic pressure to intervene, some governments did not reduce taxes or duties on fuels. In the spring of 2022, there were a number of protests in the Philippines against rising fuel prices and calling on the government to reduce or suspend taxes on fuels. The government resisted lowering taxes on fuels, stating that doing so would cost the country significant revenues that it needed, and a fuel tax cut would benefit mainly wealthier taxpayers. The government instead continued to provide targeted subsidies under existing social protection programs, such as the “Pantawid Pasada” program where public transport operators, including those of jeepneys and minibuses, receive cash cards that subsidize fuel purchase in participating fuel stations nationwide.

Some countries, especially in Latin America, have *fuel price stabilization funds* that are used to smooth prices during times of international price volatility (Box 1). These funds can in principle be self-financing by collecting funds when global oil prices are low and subsidizing prices through the fund when prices rise above a certain pre-set threshold. In 2022 and 2023, several countries utilized existing fuel price stabilization funds to try to mitigate fuel price increases. However, this measure was overall ineffective and led to ballooning deficits in the funds that forced governments to make large fiscal transfers to the funds to keep them liquid. The premise of price stabilization funds no longer matches the international oil market realities. These schemes rely on the assumption that oil prices revert to a mean price on a regular basis after short periods of deviations from the mean. Since 2004 this has rarely occurred, and instead the world has been experiencing long periods of steady price increases with sprouts of price collapses. Two recent examples of country experiences with price stabilization funds are given below:

- ❖ **Botswana:** The National Petroleum Fund (NPF) is meant to act as a buffer to pay government debts to oil marketers when domestic prices are below the costs incurred. The NPF is funded by a fuel price levy included in the fuel pricing formula. It has multiple other objectives such as funding national oil infrastructure such as storage. The fund was used in 2022 by the government to settle debts to oil marketers as the domestic fuel prices were below cost recovery and became depleted by July 2022. The government continued to accrue debts to oil companies. It had to divert funds from other levies (e.g., road maintenance levy) as well as budget from other ministries to continue to repay the oil companies but not at the pace required. Oil companies continued to suffer financial losses due to mounting debt owed by the government, resulting in fuel shortages in 2022 and 2023.

⁶ For example, New Zealand had a brief jet fuel shortage in December 2022 due to the country receiving a batch of jet fuel which failed quality control testing.

In June 2023, the government resorted to releasing 30 million liters of strategic and commercial oil stock.

- ❖ **Peru:** In April 2022, the government decided to temporarily include 84 and 90 octane index gasoline, gasoline/ethanol mix, LPG, and certain types of diesel in the Fund for the Stabilization of Prices of Fuels Derived from Petroleum (FEPC) to mitigate rising prices. The inclusion, initially set to expire at the end of June, was later extended until the end of the year. On October 17, 2022, the government approved injection of S/1.6 billion (US\$507 million) into FEPC to maintain subsidies.

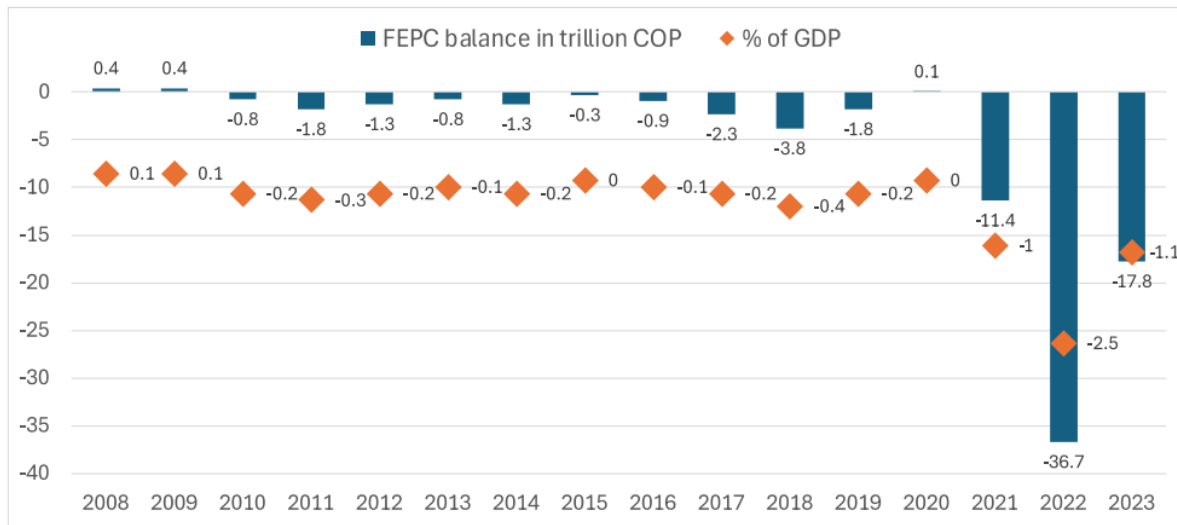
Box 1: Subsidizing fuel prices from a price stabilization fund - Experience of Colombia

Colombia created the Fuel Price Stabilization Fund (FEPC) in 2007 to mitigate the impact of international fuel price volatility in the domestic market. The fund covers the difference between oil prices on the international market and the internal value set by the government. The finance ministry administers the fund. FEPC has been used to subsidize gasoline and diesel prices and historically has nearly always been in deficit (Figure 7).

In 2022, the fund was heavily used to subsidize gasoline and diesel prices. By end of 2022, FEPC was in a deficit of around 36.7 trillion Colombian pesos (US\$8.57 billion). In December 2023, the government paid US\$2 billion into FEPC covering its outstanding 2022 accruals for the fund.

Within 2023, the government reduced subsidies on gasoline by raising gasoline prices gradually but kept diesel prices frozen throughout 2023. Colombia’s diesel price in December 2023 was 20 percent lower than January 2018 in real terms. In 2023, diesel subsidies became the greatest burden for the government, accounting for 77 percent of the 17.8 trillion Colombian pesos (US\$4.7 billion) FEPC deficit (Araujo et. al. 2024).

Figure 7: FEPC financial balance in trillion Colombian Pesos (COP) and share of GDP (2008 - 2023)



Note: From 2008 to 2019, the FEPC balance fluctuated between COP -2 to +0.4 trillion, but starting in 2020, it experienced significant deficits, dropping to COP -36.7 trillion in 2022. As a share of GDP, the FEPC remained relatively stable until 2019, when it experienced a marked increase in the deficit from 2020 onwards, reaching -2.5 per cent in 2023.

*The results for 2023 are estimates.

Source: Ministry of Finance, using data from the Ministry of Mines and Energy

Countries that have *fuel blending requirements* can use these requirements to mitigate pressure on prices and fuel supply security. Fuel blending involves mixing conventional petroleum products with liquid biofuels such as ethanol or biofuels made from vegetable oils. Countries require blending to either reduce

import costs of fuels or out of environmental considerations. In 2022, a few countries changed their blending requirements to ease pressure on domestic fuel prices. Examples include the following:

- ❖ **Finland:** In 2022, the government temporarily reduced the renewable fuel obligation on fuels by lowering the biofuels blending obligation to 12 percent in 2022 (a reduction of 7.5 percent). The renewable fuel obligation impacts the price of gasoline, even though it is mainly fulfilled with renewable diesel blends. The obligation affects the overall cost structure of the fuel distribution system, which can indirectly influence gasoline prices. The government did not lower taxes or introduce any other type of price controls. The lowered blending obligation was maintained in 2023.
- ❖ **Latvia:** The government decided to waive the requirement for the mandatory addition of biofuels to gasoline and diesel from July 2022 to the end of 2023 in order to slow price rises. During this period of time retailers and wholesale traders were able to choose if they wanted to use biofuel mixing.
- ❖ **Zimbabwe:** Government has a mandatory blending policy that requires fuel companies to mix unleaded petrol with ethanol as part of efforts to reduce the import bill. In January 2022 government reduced the blending ratio to zero due to low ethanol stocks. The blending requirement was brought back in June 2022 to ease pressure on domestic prices.

Some oil producing countries *intervene in the oil sector* through export bans or payments to domestic refineries to control domestic retail prices. With rising international oil prices, in certain cases it may be more profitable for oil producers to export than to sell in the domestic market, especially if domestic fuel prices are subsidized to a level below trade parity. Some countries, especially in Central Asia, use upstream measures to incentivize or outright control fuel supply to the domestic market. Five examples are provided below.

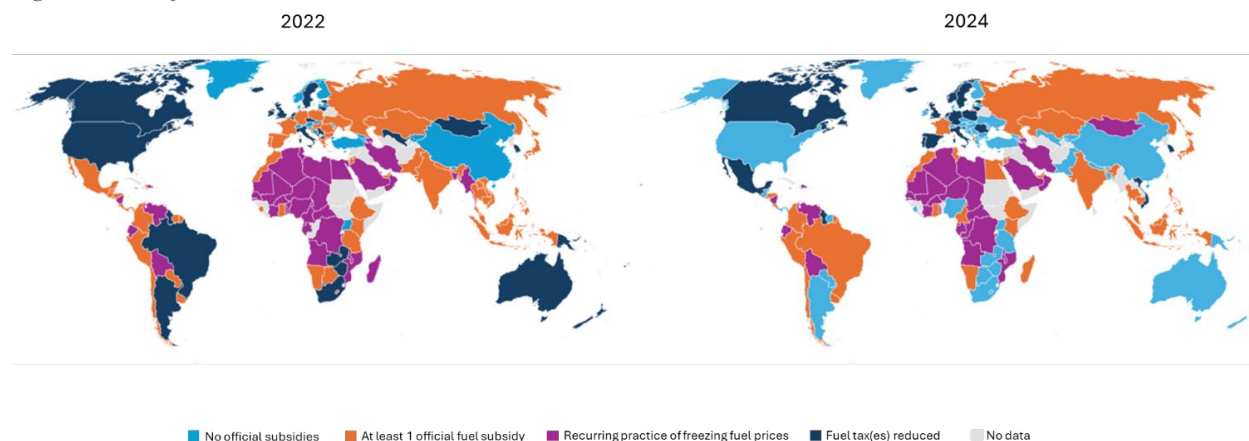
- ❖ **Kazakhstan – export ban:** The government in July 2022 instituted an export ban on diesel and gasoline for six months. The measure was extended for another six months starting from February 14, 2024. It was again extended on October 8, 2024, for another six months.
- ❖ **Kyrgyz Republic – export ban:** In March 2022, the government extended a temporary ban on oil exports outside the republic and member countries of the Eurasian Economic Union (EAEU). There was an existing export ban that had been in place since March 2021.
- ❖ **Niger – export ban:** In 2022 there were diesel shortages in the country. In June 2022 the government suspended exports of diesel to alleviate shortages.
- ❖ **Serbia – export ban:** The government temporarily banned exports of Euro diesel from the end of June 2022 to January 10, 2023. The export ban was extended repeatedly in 2022.
- ❖ **Russian Federation – payment to refineries to discourage exports:** The government uses interventions in the upstream segment as a form of price control. There is "damper" payment to domestic refineries to encourage them to sell their products on the domestic market instead of exporting.

5 Subsidizing Fuel Prices – The Global Landscape

Of the 154 economies studied by this paper, 47 had some type of fuel subsidy (beyond fuel tax reductions) in place in 2021 and a further 35 froze fuel prices for extended stretches of time. These numbers increased in 2022 to 59 and 41 economies, respectively, as governments implemented a range of subsidy provisions and maintained existing ones in an effort to protect consumers from the high levels of international oil price volatility. In 2023, 13 of these governments canceled the subsidy provisions they had provided in 2022. Five of them are in Latin America and the Caribbean.

As of January 2025, there were 36 economies with at least one official fuel subsidy and a further 32 that kept fuel prices frozen (Figure 8). This section provides a stock take of the types of fuel subsidies adopted globally since 2021. It provides detailed country experiences and analyzes the different ways governments have financed their fuel subsidy provisions.

Figure 8: State of Fuel Subsidies – 2022 vs. 2024



Source: "[Global Fuel Subsidies and Price Control Measures Database](#)" (World Bank 2025)

5.1 Types of fuel subsidies

Globally countries use different types of fuel subsidies. Fuel subsidies have long been a key component of economic policies, designed to reduce the cost of fuel for consumers and/or support energy producers.⁷ In recent years, governments have adjusted these measures to keep pace with shifting global economic and political conditions. Their approaches vary, ranging from universal subsidies that benefit all consumers to targeted schemes designed for specific groups or industries.

Some governments implement universal subsidies, ensuring fuel is more affordable for all consumers. Others take a more focused approach, directing fuel subsidies to target a certain sector (e.g., agriculture, fisheries) or consumer group such as public transport operators. Certain countries opted to distribute subsidies through conditional cash transfers relying on sophisticated social protection mechanisms to lower income and vulnerable populations. Many governments combine these methods, tailoring their fuel subsidy programs to balance affordability, economic stability, and fiscal responsibility.

Subsidy provisions are not limited to countries where the government regulates fuel prices. Even in deregulated fuel markets there can be fuel subsidies, such as tax exemptions. It is important to distinguish between subsidy delivery mechanisms especially in countries with universal fuel subsidies.

Some countries that subsidize fuel prices provide **universal fuel subsidies through fiscal transfers to domestic oil companies**.⁸ Governments can provide a subsidy anywhere along the fuel supply chain. Some provide subsidies to fuel importers or to fuel distributors. Certain oil producing countries subsidize fuels by providing fiscal transfers to the domestic refinery or upstream oil production companies. The fiscal subsidy can be a pre-determined amount fixed in the fiscal budget that is reviewed regularly. In some

⁷ For more details, please refer to Kojima (2017). Good Practice Note 1: Identifying and Quantifying Energy Subsidies. Energy Subsidy Reform Assessment Framework (ESRAF) Good Practice Note 1. World Bank.

⁸ In 2022, 60 countries financed fuel subsidies through fiscal transfers. In 2024, 33 countries continued to use fiscal transfers from the government to pay for fuel subsidies.

countries the fiscal subsidy is non-transparent as there is no clear budget line item for it. The following are examples of countries that utilize fiscal subsidies:

- ❖ **Cambodia – ongoing fiscal subsidy via retailers:** Fuel prices are regulated by the government based on a price formula in line with international prices. The Ministry of Commerce and the Ministry of Mines and Energy oversee the price cap based on a formula that takes into account the average Platts Singapore quotations plus taxes, profit margins for retailers, VAT and operating costs. Prices are historically adjusted every 10 days. For the past few years, the government has been subsidizing the price of fuels by US\$0.04 per liter of fuel. The government pays the subsidy directly to the oil retailers. By fixing the absolute amount of the subsidy rather than fixing the retail price, Cambodia has limited its exposure to ballooning subsidies. In 2022 when oil prices soared the government increased the subsidy slightly by US\$0.015 per liter, or a total unit subsidy of US\$0.055 per liter. Cambodia passed through the import costs of fuel with the exception of the foregoing limited price subsidy, thereby keeping the costs of the subsidy in check.
- ❖ **Gabon – fiscal transfers to the domestic refinery to cover losses:** Fuel prices are regulated by the Government in Gabon and are frozen for long stretches of time. For example, gasoline prices were frozen from April 2020 to November 2023. The government subsidizes ex-refinery prices as the retail prices do not cover production costs. The only domestic refinery, state-owned Sogara, has been suffering from financial losses in the past few years, necessitating large fiscal transfers from the government. Sogara recorded US\$40.68 million in net losses in 2019. The government transferred US\$24.7 million in 2021 and a further \$US30.9 million in 2022 to the refinery to cover its losses.
- ❖ **Japan – extended temporary fiscal subsidy to refineries and importers:** The Japanese fuel market has historically been deregulated but the government began providing fuel subsidies to domestic refiners and importers in January 2022, conditional on retail prices reaching pre-determined threshold levels. The subsidy initially covered gasoline, kerosene, diesel, and fuel oil to mitigate the effect of high oil prices on the economy as it recovered from the pandemic. In April 2022 the program was expanded to also cover jet fuel and LPG. The government reviews the subsidy each week. The government was planning to end the subsidies at the end of December 2023, but it extended them until the end of 2024. The government by February 2024 had spent more than US\$41 billion on the subsidy program. Japan's subsidy has come under criticism as the cost continues to rise while several local news outlets are questioning its efficacy (Takemoto 2024). As the subsidy is universal, high-income individuals and corporations benefit from it while not needing it. The fuel subsidy is also seen contrary to Japan's decarbonization goals.
- ❖ **Romania – temporary fiscal subsidy to retailers:** Romanian fuel prices are deregulated. The government in 2022 introduced a temporary fuel rebate for oil retailers selling gasoline and diesel. Under the measure, gasoline and diesel sellers received a compensation of RON 0.25 per liter from the state budget if they granted a price reduction to final consumers of RON 0.5 per liter. The measure was initially adopted from July to September 2022, but later extended until the end of 2022. Half of the subsidy (RON 0.25) was covered by the state budget and half was a commercial discount applied voluntarily by gas station chains. The government ended the scheme at the end of December 2022. By limiting both the scale and time validity of the fuel subsidy, Romania was able to limit the pressure on the fiscal budget.
- ❖ **Russia – ongoing fiscal subsidy to refineries:** The government provides a "damper" payment to domestic refineries to encourage them to sell their products on the domestic market instead of exporting. The subsidy, which has been in place since 2019, pays refiners the difference between the base price of domestic fuels and export-parity prices. The burden of this subsidy on the fiscal budget grew significantly in the past three years. In 2020 the subsidy cost US\$3.6 billion but rose to US\$8.7 billion in 2021, US\$14.9 billion in 2022 and US\$13.7 billion in 2023 (Yermakov 2024). Amid a strained fiscal budget, the government cut the subsidy by half in September 2023, which

triggered fuel shortages and forced the government to reinstate the previous subsidy before the cut in November 2023.

Subsidizing oil retailers or refineries is an untargeted measure that benefits all consumers including high-income populations that are often the least in need. Such universal fuel price subsidies are logistically easy to implement as the government deposits fiscal payment to a fixed number of companies. However, these subsidies are regressive. Time and time again they have been shown to disproportionately benefit the rich (Arze del Granado et al. 2012).

Alternatively, countries can *target fuel subsidies to certain users* using means such as targeted cash transfers or in-kind payments. Some governments subsidize specific fuels that are predominantly used by certain sectors. There are logistical costs and challenges to instituting sector targeted subsidies as fuels are used by many sectors and a noticeable price difference can encourage illegal diversion of subsidized fuels. For example, since the 1990s Ghana has been subsidizing premix fuel, which is used by fishing boats with the stated aim of reducing the operational costs of artisanal fishing industry. The price difference between premix and gasoline has encouraged diversion of premix to other uses, causing shortages of the fuel for fishermen and also raising the cost of the subsidy to the government. The government in 2009 started dyeing premix blue to enable its identification and limit illegal diversion of the fuel by other users. Despite this step, more than 200 cases of premix fuel diversion have been cited by the National Petroleum Authority since 2017.

In 2022, of the 154 countries analyzed, 27 provided fuel subsidies targeted to certain users. Some countries limit subsidies to specific sectors such as power plants that use heavy fuel oil or diesel, farmers, and public transport providers. These can be temporary one-off or lasting a pre-set time period (e.g., Bahamas' 2022 subsidy to the power utility to partially cover fuel purchase costs) or recurring (e.g., Germany's agricultural diesel subsidy). Recurring subsidies can be difficult to phase out—as the benefiting consumers grow accustomed to the subsidy, consumers are likely to be reluctant to have it reduced or eliminated. In some countries this has resulted in strikes and protests by the sectors benefiting from the subsidy. The following are recent examples of countries that implemented targeted user/sectoral subsidies:

- ❖ **The Bahamas – advance provided to power utility:** The government in 2022 subsidized the fuel costs of the power utility Bahamas Power & Light (BPL). The government made an advance payment of US\$52 million to BPL to cover its fuel bills in 2022, rather than allowing the fuel charge in the electricity tariff to rise to enable cost recovery. In 2023, BPL's fuel charge component increased by 163 percent to repay the 2022 advance paid by the government.
- ❖ **Germany – tax break on fuels used by farmers:** The government provides a tax break on diesel used by farmers, subsidizing agricultural diesel. Farmers rely on diesel for many types of machinery and are reimbursed for about US\$0.23 per liter of fuel, about 12 percent of the unit price. This is worth about US\$1,850 a year to the average farm and costs German taxpayers US\$482 million annually. Subsidies are provided based on the hectares of land tilled by farmers. In January 2024, the government announced it was ending the agricultural diesel tax break, leading to demonstrations and protests by farmers. Thousands of German farmers, truck drivers and agricultural workers gathered with tractors and other heavy equipment in front of the Brandenburg Gate in central Berlin for a demonstration against the government's plans to end tax breaks on diesel fuel. The government announced it would reduce the diesel subsidy rather than fully eliminate it in 2024.
- ❖ **Ghana – subsidized fuel used by fisheries:** In 2022 the government maintained existing subsidies on premix and residual fuel oil (RFO). However, the fuel stabilization fund was insufficient to cover the subsidy. The government accumulated arrears to suppliers of premix fuel, resulting in acute shortages. Many fishermen ceased operations while some were forced to buy unsubsidized petrol and mix it with engine oil to power their boats for fishing. Effective November 1, 2022, the

government withdrew the subsidy for RFO to ease the financial burden of the fuel subsidy and to continue subsidizing premix.

In 2022 around ten countries provided subsidies to transport operators to dampen the impact of oil price increases on public transportation fares. Countries that had existing subsidy programs to transport operators (e.g., Philippines) were easily able to scale up these programs. A few countries that had attempted to set up such programs for the first time in 2022 faced several challenges, including the logistics of developing the processes to identify the eligible transport operators and distributing the subsidy to them in an efficient manner. Overall, the country experiences in 2022 highlight the intricacies of creating targeted subsidies for transportation operators and the logistical challenges of operationalizing these subsidies should not be underestimated. Sample country experiences from 2022 are the following:

- ❖ **Ethiopia – subsidy to public transport operators:** In July 2022 the government started a ‘Fuel Subsidy Beneficiary Scheme’ for commercial transport providers. The operationalization of the scheme faced some challenges. Access to the scheme was only through a digital platform developed by the telecom company. Some transport operators had issues with the digital system, as it did not recognize their telephone numbers.
- ❖ **Jamaica – grant facility for taxi operators:** In March 2022 the government created a J\$600 million (US\$4.06 million) grant facility for taxi operators to cushion fuel cost increases. The facility would provide vouchers of about US\$150–200 to the operators. However, there were several issues in the implementation of these grants. It took longer than anticipated for the transport regulator to develop a mechanism for the taxi operators to apply for and access the grant, delaying the start of applications for the facility to the end of June. By the autumn of 2022, 13,000 operators had applied but fewer than 2,000 had been successful in receiving the grant. This was one of the grievances cited when the taxi union went on strike for several days in mid-November 2022.
- ❖ **Philippines – existing subsidy program to certain transport operators:** In 2018, the government created targeted fuel subsidy programs for certain sectors including the Pantawid Pasada Program to provide fuel subsidy to certain transport operators. The government was able to increase fiscal budget allocation to this program in 2022 and 2023 to expand the coverage of the subsidy. The program already had a well-functioning set up where fuel voucher cards were used by qualifying public transport operators to purchase fuels at subsidized rates at participating fuel stations.

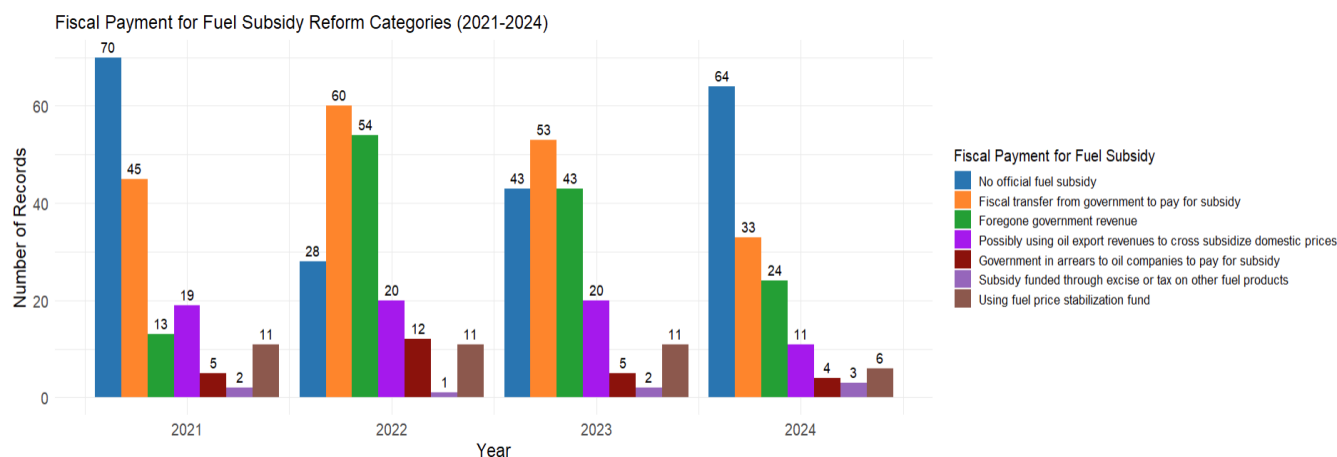
Targeted cash transfers to only the segments of the population that really need them would be ideal. However, this is a difficult task as it requires significant information and logistical process to effectively identify and distribute the subsidy to those meeting the subsidy requirements. Countries with good social registers and established social protection programs can deploy *income-targeted measures*. For example, the United Arab Emirates (UAE) has a social assistance program to support allowances in lieu of inflation in the UAE. The program includes three components: food support, electricity and water subsidy bonus, and fuel subsidy bonus. The UAE’s monthly fuel subsidy allowance is considered part of the inflation allowance. The fuel subsidy program provides monthly support amounting to 85 percent of the fuel price increase above 2.1 dirhams (US\$0.57) per liter. To get the subsidy individuals need to apply for it by contacting the Ministry of Community Development. To be able to benefit from the monthly fuel subsidy in the Emirates, the applicant must be among the low-income category in the Emirates with monthly income less than AED 25,000 (US\$6,800).

5.2 Financing fuel subsidies

Globally several different methods are used to fund fuel subsidies. The most prevalent is financing subsidies through the fiscal budget. This method is most prevalent in Sub-Saharan Africa. Another approach is to forgo government revenue by eliminating or reducing fuel taxes. Both of these methods were increasingly

used in 2022 (Figure 9). Some countries provide off-budget fiscal subsidies. For example, some oil producing countries use oil export revenues to finance domestic fuel price subsidies. In some countries the oil companies subsidize fuel prices by incurring losses or using profits from other business areas—often upstream petroleum rents—to cross-subsidize fuel subsidies. A subsidy can be entirely off budget, or partially off budget. Even in countries where the subsidies are budgeted, the total expenditures on subsidies markedly exceed the budgeted amount.

Figure 9: Methods of Paying for Fuel Subsidies (2021-2024)



Source: "[Global Fuel Subsidies and Price Control Measures Database](#)" (World Bank 2025)

Note: The figure captures the 154 economies covered by the database. Some countries utilize multiple payment methods to pay for fuel subsidies; the categories in the chart are not exclusive of each other.

In many countries fuel subsidies are financed through *large fiscal transfers from the government to oil companies* (national oil companies, refineries, oil marketing companies). Since 2022, many countries struggled to pay for these subsidies. In some cases, this has resulted in fuel shortages as the oil companies were unable to pay for imports. Two examples of government transfers to oil companies to finance subsidies are the following.

- ❖ **Burkina Faso:** The government subsidizes gasoline, diesel, kerosene, and LPG by covering the gap between domestic prices and fuel supply costs through SONABHY, the national oil company. Despite rising international oil prices, increasing supply costs, and currency depreciation, fuel prices remained frozen for extended periods. This led to the accumulation of over US\$660 million in arrears (3.5 percent of GDP) to SONABHY between March and December 2022, forcing SONABHY into debt with its fuel suppliers. In February 2023, amid declining fiscal space and deteriorating fuel supply, the government raised the price of gasoline to US\$1.39 per liter, up from US\$1.23 in January, a 13 percent increase. This marked the first price adjustment since May 2022. As of June 2024, gasoline prices remain frozen at this level. In addition to these consumer fuel subsidies, SONABHY also supplies subsidized fuel to SONABEL, the national electricity utility, for power production. This arrangement was formalized in a 2016 tripartite agreement between the government, SONABEL, and SONABHY, establishing a pricing mechanism to support SONABEL's financial stability. While SONABEL has since improved its financial position, its continued stability remains dependent on receiving subsidized fuel.
- ❖ **Kenya:** Kenya started subsidizing fuel prices in April 2021 through the fiscal budget. The monthly subsidy cost rose from negligible amounts in 2021 to an estimated US\$119 million a month by June 2022. At the same time Kenya's public debt rose to about US\$74 billion in June 2022. The government accumulated arrears in subsidy payments to oil marketing companies due to fiscal

constraints. By August 2022 the companies were owed US\$564 million, putting them under a significant financial strain. As a result of the cash shortfall, the companies were unable to pay for imports, leading to widespread fuel shortages in Nairobi and Western Kenya in early September 2022. The country's new president expressed his concerns on fuel subsidies, calling them ineffective and unsustainable. The cost of maintaining the subsidy was equivalent to the government's entire national development budget. In September 2022 the government signed a supplementary budget to settle its subsidy arrears and stopped subsidizing gasoline. Kenya retained the subsidies for diesel and kerosene to some degree, stating that these subsidies help cushion lower-income households who use public transport as well as kerosene for lighting and cooking. In August 2023, the government reinstated the gasoline subsidy in a reversal of the earlier government policy in the face of threats of public protests against rising gasoline prices.

Since 2022 some countries have not had any fiscal space to finance fuel subsidies and had to ***borrow from international lenders***, such as in El Salvador and Honduras.

- ❖ **El Salvador:** In 2022, the government instituted a range of measures to control domestic fuel prices. The government started setting gasoline and diesel price ceilings in April 2022. Regular gasoline and diesel prices were frozen from April to the end of December 2022. The government stated that it was absorbing the increase in international fuel prices. The Ministry of Finance signed a US\$208 million loan with the Central American Bank for Economic Integration (CABEI) to finance the scheme.
- ❖ **Honduras:** Honduras in June 2022 signed a US\$208 million loan with CABEI to support financing fuel and electricity subsidies. US\$183.86 million of the loan was allocated to the reduction of the tax on super and regular gasoline and diesel, US\$6.69 million for an additional subsidy to cover 50 percent of the increase in the price of diesel.

In some countries oil marketing companies, often ***national oil companies, subsidize*** domestic fuel prices ***by incurring losses or using profits from other business areas to cross-subsidize fuel subsidies***. Where fuel sellers are forced to bear losses, for example on account of late or no subsidy reimbursements—this can lead to fuel shortages and even lead companies to exit the market. In some countries the national oil company co-exists with private oil importing and retailing companies. If the government puts pressure on the national oil company to sell below cost, private companies cannot compete, leading over time to the national oil company becoming the monopoly seller of the (subsidized) petroleum products. This in turn eliminates competition, requiring economic regulation and inevitably involving the government in price setting even after subsidies are ended. Recent country experiences include the following.

- ❖ **Brazil:** Officially there is no subsidy or price control on fuel prices in Brazil. However, in the past few years the government has pressured the national oil company Petrobras to lower prices. In May 2023 Petrobras switched from a more market-based pricing policy to one that allows flexibility to smooth volatility in fuel prices. The new pricing policy is reported to be discouraging private importers causing risk of shortages as the domestic refining capacity is not sufficient to cover demand. Despite pressure from investors and importers, Petrobras sold fuels below international levels for much of 2023.
- ❖ **Dominica:** RUBIS West Indies Limited (RUBIS Dominica), one of the main oil marketing companies in the country, announced in September 2022 the suspension of fuel sales in Dominica, following significant financial losses incurred since entering Dominica in 2011 and which have accrued at an even greater pace for the past six years. The company stated that its losses were due to highly unfavorable mandated fuel prices, which are below the true importation value of fuel.
- ❖ **Hungary:** The government introduced fuel price caps in November 2021 substantially below market prices. This led to a surge in demand from lorries transiting Hungary and retail buyers from neighboring countries. At the same time fuel importers were unable to recover costs and had to reduce imports. Technical issues in the domestic refinery further constrained domestic supply

resulting in widespread fuel shortages. After 13 months, on 6 December 2022, the government removed all fuel price caps.

- ❖ **Nigeria:** Nigeria is unique in having a fuel subsidy only for gasoline and for no other fuel. In 2016 and 2020, as the global oil price collapsed, the government announced removal of the gasoline subsidy, only to fail to raise the price as the international gasoline prices rose subsequently. The historic petroleum industry reform law signed in August 2021 allowed the gasoline subsidy to continue for only 6 months, ending in February 2022. This provision was not implemented, and the landing price of gasoline was frozen from December 2020 to the end of May 2023. Only the national oil company has been involved in providing this subsidy since 2016, making it the monopoly importer of gasoline in a country where 100 percent of all gasoline sold has been imported for years.

Some governments have forgone *tax revenue* to subsidize fuel prices by reducing or exempting taxes on fuels. The losses have been converted to real US\$ 2023 across all countries for consistency.

- ❖ **Belize:** The government is estimated to have lost US\$31.2 million in fuel tax revenue due to its decision to forgo taxes on diesel and regular gasoline in 2022.
- ❖ **Mexico:** In 2022, the government reduced taxes on fuels (IEPS tax) temporarily, resulting in a loss of MX\$88.59 billion (US\$4.70 billion) in tax revenue.
- ❖ **Montenegro:** Reductions in the fuel excise duties in 2022 is estimated to have cost the government US\$54.7 million.
- ❖ **Serbia:** The Fiscal Council estimates that the lowering of excise taxes on petroleum products cost the state more than RSD 20 billion (US\$190 million) in 2022.
- ❖ **Uzbekistan:** The Energy Ministry estimates that forgoing the fuel excise tax cost about 1.2 trillion som (close to US\$104 million) in lost revenue in 2022.

6 Reforming Fuel Subsidies and Pricing Mechanisms – The Global Landscape

As highlighted by the country experiences in the previous two sections, since 2021 a growing number of governments utilize an array of mechanisms to control and subsidize fuel prices in an effort to protect consumers from ongoing international oil price volatility. In 2022, sixty-two economies reduced taxes and import levies on fuels while 59 economies had a form of official fuel subsidy, and an additional 41 froze fuel prices. Additionally, 29 countries used both tax reductions and price subsidies in 2022. While dampening the impact on retail prices of rising international prices in the short term, these policies had significant negative repercussions on the fiscal budget and the domestic oil market.

Countries that subsidized fuel prices by keeping them frozen had difficulties maintaining such practices as international oil prices skyrocketed from the low levels in 2020. Running out of fiscal space, countries accumulated arrears to oil companies (e.g., Botswana, Mozambique), had to borrow from international lenders (e.g., El Salvador, Honduras) and instituted sudden large price increases (e.g., Cameroon, Central African Republic, Senegal) in 2022 and 2023. Reductions in taxes and levies resulted in significant loss in revenue to governments, leading to reduced fiscal space to support other activities. Keeping prices below costs of importation led to widespread fuel shortages and increasing illegal fuel trade.

Grappling with the rising costs and negative repercussions of subsidizing fuel prices, several governments are now considering reforming fuel pricing policies and phasing out subsidies. This section provides an overview of the countries that since 2021 are (i) implementing reforms, (ii) reversed previous reforms, or (iii) delayed planned reforms. It distills recommendation and lessons learned from the recent history of reforming fuel subsidies.

6.1 *Current state of fuel price and subsidy reforms (2021-2024)*

Since 2021, several countries announced plans to reform fuel subsidies. However, the rise in international oil prices put pressure on governments globally resulting in a proliferation of subsidy and fuel price control measures since 2022. In 2021, 14 countries introduced temporary fuel tax reductions to mitigate fuel price impact as their economies were recovering from the impact of COVID-19. In 2022, this number rose to 61. In 2021, 47 countries had different types of fuel subsidies (beyond fuel tax cuts) in place. In 2022, this number rose to 59 countries. In 2021, 35 countries maintained frozen fuel prices. In 2022, this number rose to 41. There is significant heterogeneity in how countries approached fuel subsidies in the past four years. This section takes stock of countries that: (i) instituted temporary measures in 2022 and removed them after a period; (ii) delayed planned subsidy reforms; (iii) reversed subsidy reforms; or (iv) are considering and implementing reforms currently.

About 10 countries have fully removed the temporary fuel price support measures they introduced in 2022. A further 21 countries started reforming their fuel subsidy policies in 2023 and an additional three are considering reforms. However, 54 countries from the 154 countries considered in this paper currently have no plans to phase out their existing fuel subsidy measures.

In 2022, many countries introduced **temporary price control measures and subsidies** to mitigate the impact of rising oil prices for domestic consumers. Ten countries that introduced temporary fuel price controls and subsidies in 2022 removed these measures fully by the end of 2023. Their experience indicates that if a temporary subsidy or price control is introduced, it is best to be clear upfront on (i) when the subsidy will be ended or the conditions to be met for the subsidy to end, and conversely clear criteria for potential extensions of the subsidy termination deadline (e.g., import price above a certain threshold); and (ii) sources of financing (via fiscal budget, usage of future taxes/levies to fund it over a period of time, fuel stabilization fund and/or oil export revenue if available).

Cabo Verde is one of the ten countries that have removed temporary fuel price measures. In the period from April 1, 2022, to June 30, 2022, the government temporarily suspended its automatic fuel price-setting mechanism, stating that they wanted to alleviate the domestic effects of the escalation of prices in the international fuel market. Prices for LPG and diesel sold to power plants were frozen from March to July 2022, while the prices of all other fuels were raised by only 5 percent. The government stated that if it were to fully pass on the rise in imported fuel prices the price of gasoline would have increased by 13 percent and that of diesel by 26 percent.

In July 2022, the government returned to implementing the price-setting mechanism, passing on the cost of imported fuels to consumers. On average fuel prices increased by 26 percent in July 2022, primarily stemming from unfreezing diesel for electricity generation, which rose by 53 percent. However, the government still tried to mitigate the impact of oil price volatility by reducing the import duty and VAT on fuels in August 2022, including lowering the import duties on gasoline from 20 percent to 10 percent. Taxes on diesel and gasoline were also reduced, changing from 10 percent to a fixed six escudos (US\$0.06) per liter. These reductions were in effect from August 2022 to January 2023.

Cabo Verde's government clearly communicated to the public that it was a price-taker of oil products. The government could provide only temporary measures to alleviate the pressure of international oil price increases. Policy makers were upfront about the country's fiscal limitations to provide fuel subsidies. The regulatory agency clearly stated that the measures would be temporary, thus tempering the public's expectations. The prices were subsidized only for three months with priority given to LPG (used mainly by households) as well as fuel oil to power plants (to mitigate impact on power prices). The measures were in force during the main disruptive months in the oil markets, thus shielding consumers partially from the

international price increases. When prices started to decline in the summer of 2022, the government gradually removed the subsidy.

A few oil exporters that had been *planning on reforming fuel subsidies delayed these plans* in 2022, as they benefited from the rise in oil prices and had more space to fund domestic subsidies. One example is Algeria, which is an established oil producer. Despite its significant refining capacity, the country historically relied on gasoline and diesel imports because domestic refineries lacked the sophistication needed to produce sufficient quantities of several oil products. This situation improved as several refineries completed upgrades, allowing Algeria to meet domestic demand for gasoline and diesel. As a result, Algeria is now a net fuel exporter. The government regulates the prices of liquid fuels, which have been frozen for several years. Between 2015 and 2020, Algeria spent US\$8.3 billion subsidizing gasoline imports, according to a 2021 statement by Energy Minister Abdelmadjid Attar to the Algerian News Agency.

The government first considered introducing more targeted fuel subsidies in 2015 and again in 2017. Fuel subsidy reform was again being considered in 2021 as the decline in energy prices limited fiscal space for universal subsidies. Algerian leaders announced plans for tax increases and subsidy cuts in an effort to rein in unsustainable deficit spending. However, in 2022, as international prices rose the government announced they were delaying the planned tax increases and subsidy reforms, as the surging demand for Algeria's oil and gas exports temporarily reduced pressure for reforms and created fiscal space to continue funding subsidy programs. This delay has allowed additional time for the authorities to prepare for phasing-out subsidies with complementary mitigatory measures for vulnerable consumers. As of January 2025, gasoline and diesel remain frozen at their 2020 levels, while LPG prices have not changed since 2005.

By contrast, the 2022 rise in fuel prices *accelerated efforts to reform subsidies and price control* in several countries. One example is Malaysia, where the government has historically subsidized gasoline, diesel and LPG prices. Since 2022 the cost of these subsidies rose significantly. In 2024 the government estimated it had spent 81 billion ringgit (US\$17.3 billion) on energy subsidies (fuel and electricity) in 2023. Its diesel subsidy bill alone has risen 10-fold from about US\$0.4 billion in 2019 to US\$3.1 billion in 2023.

With the ballooning cost of subsidies, the government in 2023 announced its intention to phase out universal fuel subsidies and replace them with targeted measures. Subsidy removal started with diesel prices rising by 50 percent on June 10, 2024. The government is maintaining diesel subsidies for now for certain users such as fishermen and public transport vehicles such as buses and taxis. The Prime Minister also announced that the government would provide cash assistance to eligible Malaysian individuals owning diesel vehicles, as well as small-scale farmers and commodity smallholders to mitigate the potential impact of rising prices on their incomes.

6.2 Policy recommendations for reforming fuel subsidies

Experience from the previous decades indicates that fuel subsidy reform is a continuous process replete with challenges and with no clear end. Many countries that reform fuel subsidies have setbacks and even reform reversals. Each country has a unique starting point as the subsidy and fuel market policies vary between countries. Political and economic conditions in countries also have a significant influence on reforms. Strong political will, government capacity to institute the reforms, and buy-in from the public are the key ingredients that ensure durability of reforms.

Recent experience with fuel subsidy reforms provides some lessons for countries that are currently considering or are in the midst of instituting such reforms. Some key considerations include the following.

Social protection measures and targeted cash transfers: Targeted cash transfers are a crucial policy tool for offsetting the impact of fuel price increases impacting energy prices for vulnerable households. Unlike universal subsidies, which often benefit wealthier groups disproportionately, cash transfers can be tailored to reach those who need them most. Advancements in digital technologies, such as mobile payment systems and electronic wallets, have revolutionized how these transfers are delivered (Box 2). These tools ensure timely, accurate, and scalable support to beneficiaries. For example, the use of digital identification systems can reduce leakages, improving accountability and targeting efficiency.

Box 2: Utilizing targeted social protection mechanisms – Experience of Angola

Angola, a lower-middle income country of 32 million people and Africa’s second largest oil producer, is currently undertaking fuel subsidy reforms. For many years, fuel prices in Angola did not reflect economic or opportunity costs and remained frozen for extended periods. Meanwhile, subsidy costs fluctuated with international oil prices and were affected by changes in the exchange rate and transportation costs. Effectively, petroleum products in Angola have been subsidized through multiple mechanisms, including artificially low crude oil prices in U.S. dollars (for domestic refineries), an outdated (and consequently overvalued) exchange rate, and direct price subsidies.

An ad-hoc price adjustment at the end of 2015 mostly eliminated subsidies. However, most fuel prices remained frozen at their 2015 levels until June 2023. During this time subsidies re-emerged with the gradual recovery of petroleum product prices in 2022 and the continued devaluation of the domestic currency. Low domestic fuel prices in Angola, relative to neighboring countries, also encouraged fuel smuggling. On June 1, 2023, the government issued a decree laying out the multiphase approach to fuel subsidy reform, including a near-term adjustment in the price for gasoline. The government subsequently raised diesel prices in April 2024.

The government recognized that while fuel subsidies are poorly targeted to the needs of the population, their removal requires careful preparation, including adequate compensation for the poor through targeted social protection. In response, the government, with support from the World Bank, has set up a new cash transfer program (Kwenda) to protect the poor while building permanent delivery systems for an effective social safety net mechanism (World Bank 2022).

Kwenda is the first poverty targeted cash transfer in Angola. The government built a unified, single social registry (Decree No. 136/2019 of May 10, 2019) as the basis for the program. The program thus far has used four payment methods: Electronic-Based Debit Cards at ATMs; Electronic-Based Debit Cards at Point-of-Sale, Electronic-based Mobile, and Cash. The program focuses on remote areas within municipalities where infrastructure conditions are more limited. The selection of the payment method aims to provide beneficiaries with a payment option that is not more than 15 km from their location. The Kwenda Program has already benefited 1 million households in 64 municipalities in 196 communes, in 8,396 neighborhoods and villages of Angola (World Bank 2024b).

Use fiscal savings from reform strategically: How the savings from fuel subsidy reforms are repurposed can significantly shape the sustainability of the reform itself. Redirecting these savings toward social protection programs, physical or social infrastructure projects, or investments in renewable energy helps mitigate the economic impacts of the reform and maintain public support (Box 3). Strategic use of fiscal savings not only provides immediate relief to vulnerable populations but also funds long-term development priorities, ensuring both economic and social benefits. By leveraging growing digital tools, governments can more efficiently identify beneficiaries and deliver targeted transfers, maximizing the impact of resources and ensuring that the most disadvantaged groups receive the support they need.

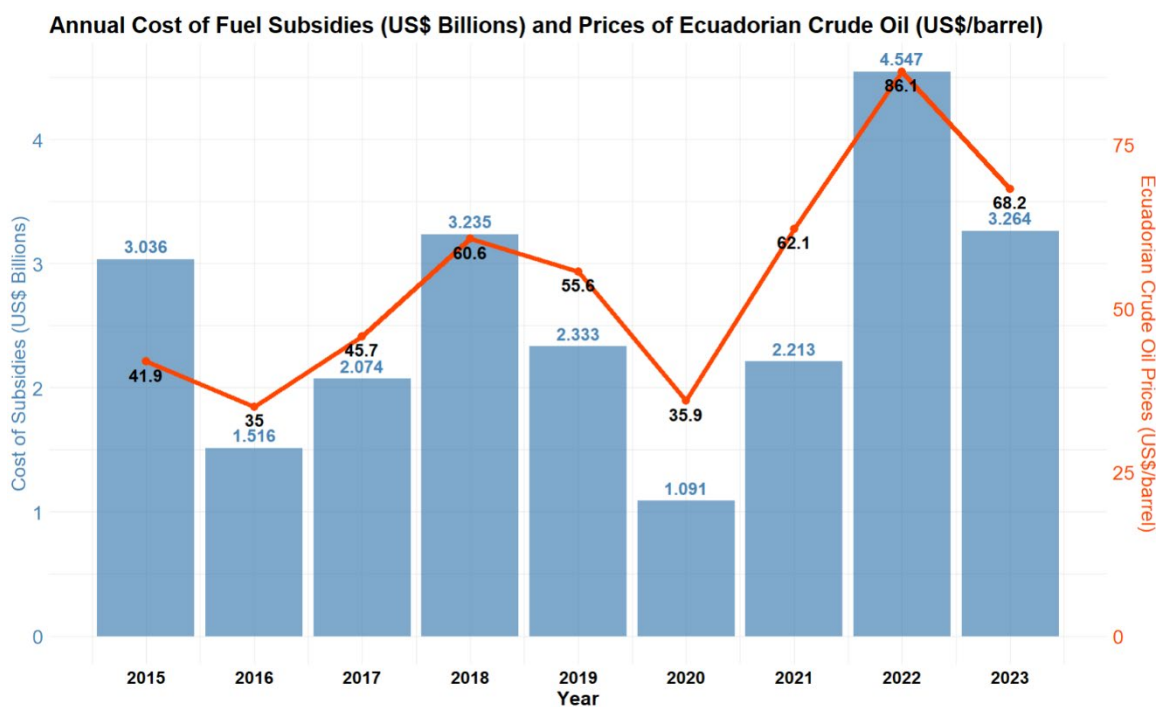
Box 3: Using fiscal savings from reforms for social programs and encouraging fuel switching – Experience of Ecuador

Ecuador has a history of subsidizing fuel prices with some failed attempts at reforming these subsidies. In October 2019, the government abruptly announced the elimination of subsidies on gasoline and diesel that had been in place for nearly 40 years. Following the announcement, prices for gasoline and diesel rose overnight by 25%-75%. Public transport fares also doubled overnight, as transport operators passed on the price increases to fares.

At the time, a quarter of Ecuador’s population lived below the poverty line. The sudden and significant price hikes, coupled with the significant portion of the population with income constraints, meant that many Ecuadorians could not cope with the price increases. This triggered 12 days of nationwide violent protests, which at one point led the government to move out of the capital city. The protests included many different groups, including transport workers and indigenous communities from the Amazon and the Andes. Ecuador is a net exporter of crude oil, thus many indigenous communities in the country saw the fuel subsidy as one of the few tangible benefits they received from the exploitation of domestic natural resources. Twelve days after announcing the removal of subsidies, the government reinstated them.

Fuel subsidies have become a significant fiscal burden for the country in recent years (Figure 10). They are three times higher than the government’s spending on social protection programs, such as the Human Development Bonus (BDH), pensions for the elderly, among others. In 2022 fuel subsidies were estimated to have cost the fiscal budget US\$4.5 billion, exceeding the fiscal expenditure on health that year (Ministry of Finance of Ecuador 2022).

Figure 10: Annual Cost of Fuel Subsidies in Ecuador (2015-2023)



Faced with the ballooning fiscal costs of fuel subsidies, while cognizant of the failures of the rushed 2019 reforms, the government embraced a gradual elimination of fuel subsidies over the past two years. It started by eliminating the diesel subsidy for large shrimp-producing farms in 2023. The fuel subsidy removal for large shrimp farms is not expected to significantly impact poverty, as small and artisanal shrimp farms production and small businesses in the sector continue to benefit from remaining subsidies. President Guillermo Lasso announced that the savings from this measure, estimated to be around US\$160 million per year, will be redirected to social services (Negrete 2023).

Eliminating the diesel subsidy for large shrimp farms is also expected to incentivize more efficient fuel use and reduce GHG emissions derived from fuel consumption in the sector. Following the removal of the subsidy, the Development Bank of Latin America and the Caribbean (CAF) and the Ecuadorian government signed a credit-lines deal worth US\$200 million. This funding will support the connection of 55,000 hectares of land used by the Ecuadorian shrimp industry to the national electricity grid, enabling these farms to switch from diesel powered generators to electricity from the grid. As Ecuador’s grid is primarily composed of hydropower, this transition is expected to lower emissions and improve energy efficiency in the sector (Negrete 2023).

Adjust prices and implement geographic pricing differentiation: Governments face the critical decision of whether to implement reforms gradually or through rapid price adjustments. Both approaches have benefits and risks. To minimize public resistance and economic shock, countries could consider a gradual approach to phasing out of fuel subsidies. This approach can allow time for households and businesses to adjust to the changes, while also giving governments the flexibility to implement mitigating measures like cash transfers and to adequately communicate the reforms to the public. Quick price adjustments result in the rapid reduction and removal of subsidies. This approach allows quicker implementation, delivers immediate fiscal benefits, and quickly corrects existing market distortions. Additionally, geographic pricing differentiation can help address regional disparities. Higher-income areas or urban centers may be better equipped to handle price hikes, while poorer, rural regions may need additional support.

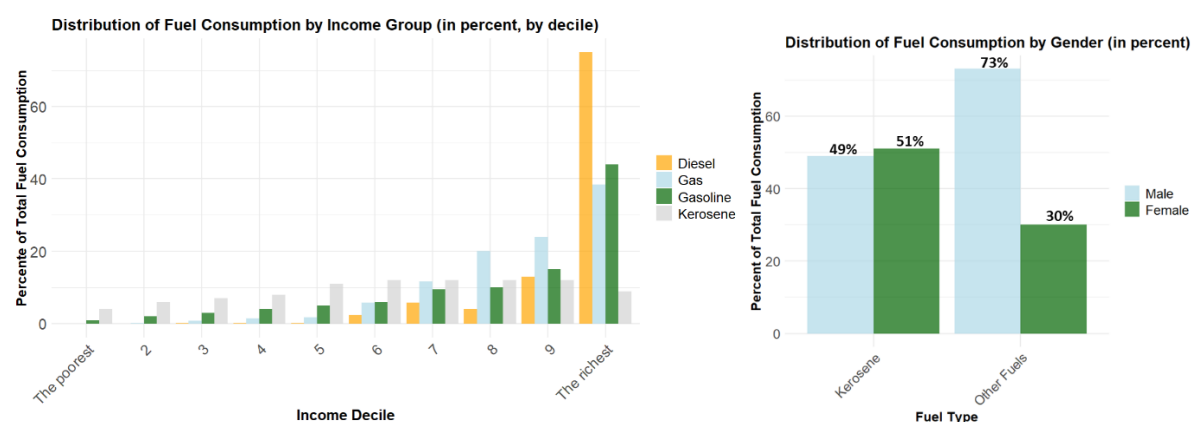
Use distributional analysis and model different reform scenarios: Using distributional analysis, governments can design subsidy reforms that minimize harm to low- and lower middle-income groups while maximizing the efficiency of targeted support (Box 4). Developing multiple reform scenarios allows governments to assess the fiscal, social, and political implications of various strategies. By modeling different approaches, policy makers can identify potential risks and benefits, optimizing their plans for subsidy removal. For instance, scenario planning tools can quantify the trade-offs between gradual and accelerated reforms or analyze the impact of regional price adjustments. Scenario modeling should also incorporate contingency plans for external shocks, such as sudden oil price spikes, ensuring that reforms remain adaptable to changing circumstances.

Box 4: Distributional analysis to inform fuel subsidy reforms - Experience of Cameroon

Cameroon has historically subsidized domestic fuel prices, partially relying on its crude oil export revenues. However, with no domestic operational oil refineries, the country is fully reliant on fuel imports. The fiscal cost of subsidies spiked from 0.8 percent of GDP in 2021 to an estimated 2.9 percent of GDP in 2022. The expenditure on fuel subsidies (CFAF 810 billion in 2022) was higher than the total budget allocation for education (at CFAF 715 billion), and over three times the expenditure allocation for the health sector (CFAF 229 billion) (World Bank 2023).

The World Bank’s distributional analysis of fuel subsidies in 2022 found that fuel subsidies are mostly captured by male-headed rich households living in urban areas (Figure 11). Fuel subsidies, with the exception of kerosene, were found to benefit mainly the richest segments of the urban population. Kerosene, used mainly for lighting in rural areas, was found to be more equally distributed across income groups.

Figure 11: Distributional Analysis of Fuel Subsidies in Cameroon



Source: Cameroonian authorities and World Bank staff calculations (World Bank 2023).

Note: The distribution of fuel consumption by deciles is estimated from data from the 2021-2022 household survey.

The findings from the distributional analyses were a component of the government’s considerations in reforming fuel subsidies. In early 2023, Cameroon started phasing out fuel subsidies by increasing retail fuel prices (diesel +25 percent, gasoline +15 percent, kerosene to industries +60 percent). The government kept the price of kerosene used by households unchanged. In its 2023 budget, the Government of Cameroon significantly reduced expenditure on fuel subsidies to CFAF 640 billion. Eliminating (or substantially reducing) subsidies for the most regressive fuels can help limit the fiscal cost, while mitigating the impact on low-income households (*Cameroon Economic Update: Reforming Fuel Subsidies*, World Bank 2023).

Governments need to build broad-based support through stakeholder engagement: Strong political leadership and public buy-in are important for the durability of fuel subsidy reforms. Governments must take ownership of the process by ensuring clear and transparent communication about the goals, timelines, and expected impacts of reforms. Engaging stakeholders, including businesses, civil society, and community organizations, increases trust and minimizes opposition. Addressing the political economy of subsidies requires anticipating resistance from groups that benefit disproportionately from existing subsidies, such as certain industries or high-income households. Open dialogue and participatory decision-making processes can reduce conflicts and build a coalition of support for reforms.

Frequent and regular fuel pricing formula adjustments: Countries with regulated fuel prices should periodically review their fuel pricing formulas to ensure they use the most appropriate international prices as benchmarks and update the local cost elements in their formulas accordingly. Implementing a fuel pricing formula to adjust prices regularly aligns domestic fuel prices with international markets, preventing the buildup of fiscal imbalances. The practice of changing prices regularly and frequently, introduces discipline and makes consumers more accustomed to price adjustments. While price stability has certain advantages, the global experience suggests that acquiring the habit of changing prices takes time, and the longer the time lapse between successive price changes, the greater is the resistance to increasing prices by the public. To insulate pricing policy from short term political interference, regulatory bodies in charge of setting fuel prices should be composed exclusively of highly skilled technical personnel with expertise in energy and fiscal matters.

Coordination and cooperation among government agencies: Fuel subsidy reforms require effective coordination among multiple government agencies, including those responsible for finance, energy, and social protection. A well-coordinated approach ensures that fiscal savings are used efficiently, that vulnerable groups are protected, and that the implementation process runs smoothly. Establishing a cross-government task force or reform committee can help streamline decision-making, align objectives, and ensure that all departments are working toward a common goal. Government agencies staffed with energy and fiscal experts can provide independent oversight of pricing adjustments, reduce political interference, and maintain public confidence. These institutions can also facilitate the integration of reform efforts into broader national development plans, ensuring that reforms contribute to long-term economic resilience and sustainability.

7 Conclusions

Internationally there is strong commitment and momentum to phase out universal fuel subsidies. The G20 governments committed to ending government support to fossil fuels through a number of reform pledges, starting with the G20’s 2009 commitment to phase out “inefficient fossil fuel subsidies that encourage wasteful consumption” (G20, 2009). The Friends of Fossil Fuel Subsidy Reform (an informal group of G20 countries) launched a Communiqué signed by 40 countries and hundreds of business organizations that calls for increased efforts to phase out subsidies to fossil fuels (Zinecker et al., 2018). Technical support to reforming governments is increasingly available from a number of organizations including the World Bank.

However, at the national level, the politics of subsidy reform become more complicated. The process of reforming fuel subsidies and pricing mechanisms is complex and politically challenging. Subsidies once introduced are difficult to eliminate as the population becomes accustomed to subsidies and there can be political sensitivities for their removal. In many cases, subsidy removal can be met with public protests and resistance. In some instances, in the face of strong public resistance governments reverse subsidy reforms. Public resistance to subsidy reforms can stem from a lack of information on how the money saved from the subsidy removal will be used (e.g., for health care, education), distrust in the government's ability to use the savings for the benefit of the population, and lack of social protection mechanisms to protect the vulnerable consumers most impacted by the subsidy removal.

Sustainable fuel subsidy reforms hinge on gaining public support especially through a communication program that details the motivation of the government for instituting these reforms and with credible targets on how the savings will be utilized for the public good while protecting vulnerable consumers.

As of January 2025, at least 16 economies are in the midst of implementing subsidy reforms, while nine others are considering reforming their existing subsidies in the coming years. These countries can benefit from the rich global experience with instituting reforms as presented in this paper as well as in the two new World Bank global databases which will be updated and maintained on an ongoing basis through the World Bank's new [Global Fuel Pricing and Subsidy Policies Dashboard](#).

8 Appendix 1: Geographic Coverage of [Global Fuel Subsidies and Price Control Measures Database](#)

Region	List of Economies	Total
Europe and Central Asia	Albania, Armenia, Austria, Azerbaijan, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Georgia, Germany, Greece, Greenland, Hungary, Iceland, Ireland, Italy, Kazakhstan, Kyrgyz Republic, Latvia, Lithuania, Luxembourg, Moldova, Montenegro, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Russian Federation, Serbia, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Türkiye, Ukraine, United Kingdom, Uzbekistan	46
East Asia and Pacific	Australia, Cambodia, China, Fiji, Indonesia, Japan, Korea, Rep., Lao PDR, Malaysia, Mongolia, Myanmar, New Zealand, Papua New Guinea, Philippines, Singapore, Thailand, Viet Nam	17
Latin America and Caribbean	Argentina, Bahamas, The, Barbados, Belize, Bolivia, Brazil, Cayman Islands, Chile, Colombia, Costa Rica, Curacao, Dominica, Dominican Republic, Ecuador, El Salvador, French Guiana, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Martinique, Mexico, Nicaragua, Panama, Paraguay, Peru, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago, Uruguay, Venezuela, RB	33
Middle East and North Africa	Algeria, Bahrain, Egypt, Arab Rep., Iran, Islamic Rep., Israel, Jordan, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Tunisia, United Arab Emirates	14
North America	Bermuda, Canada, United States	3
South Asia	Bangladesh, Bhutan, India, Nepal, Pakistan	5
Sub-Saharan Africa	Angola, Benin, Botswana, Burkina Faso, Burundi, Cabo Verde, Cameroon, Central African Republic, Chad, Congo, Dem. Rep., Congo, Rep., Côte d'Ivoire, Equatorial Guinea, Ethiopia, Gabon, Gambia, The, Ghana, Kenya, Lesotho, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Senegal, Sierra Leone, South Africa, Tanzania, Togo, Uganda, Zambia, Zimbabwe	36
Total		154

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