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GLOBAL LANDSCAPE OF FUEL SUBSIDIES & PRICE CONTROLS

APRIL 2025

WORLD BANK GROUP

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EXECUTIVE SUMMARY

Oil price increases that began in late 2020 have led to a global proliferation of liquid fuel subsidies and price controls, as governments sought to reduce, redistribute, or delay the impact of rising and volatile energy prices on consumers. This report draws on two new global databases developed by the World Bank to examine petroleum product pricing regimes and consumer price subsidies implemented in 154 economies since 2021.[1] It provides valuable findings and actionable insights to help policymakers in their ongoing efforts to reform fuel pricing mechanisms and phase out subsidies.[2]

Key Findings

In most developing countries the government sets fuel prices; governments that adjust prices infrequently face significant distortions in their domestic fuel market. As long as there is adequate competition in a country's fuel market, there is no reason for fuel pricing to be regulated by the government. Out of the 154 economies studied in this report, less than half have 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. In 2022, 45 countries with regulated fuel prices experienced fuel shortages, and out of these more than half had frozen fuel prices.

Many governments, even those with deregulated fuel prices, feel compelled to intervene in the domestic fuel market during times of sudden oil price spikes. Domestic prices in many countries did not track international fuel prices in 2022, when international oil prices rose significantly. Public pressure for governments to intervene in the fuel markets surged, with protests and strikes in at least 37 countries demanding that governments implement measures to lower 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,

1 The databases cover advanced as well as developing economies. They focus on liquid fuels, which include petroleum products such as gasoline, diesel, kerosene, liquid petroleum gas (LPG), and heavy fuel oil (HFO).

2 The analyses in this report rely on the February 2025 version of the databases.

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. While these measures provided short-term relief for consumers, they came at a high cost to public finances. Many governments were forced to cut spending in other essential sectors, borrow funds, or increase future payment obligations.

Once introduced, a subsidy or price control can be difficult to phase out, and in fact countries repeatedly extended the duration of the measures they introduced in 2022—some of which remain in place as of 2025. By the start of 2023, only 13 countries had removed the temporary subsidy on fuels that they instituted in 2022. As of January 2025, 14 countries continue to maintain the 2022 fuel tax reductions. These include advanced economies such as the Netherlands and the United Kingdom. Additionally, fuel prices have remained unchanged in several countries over this period. In 2024, 19 countries kept regular gasoline prices at 2022 levels, 9 did so for premium gasoline, and 24 for diesel. Countries that successfully eliminated temporary subsidies (for example, Cabo Verde) and price controls (for example, Albania) were explicit with the public from the start on the measure's short-term policy objectives as well as the fiscal costs and implications of maintaining these measures (that is, a reduction in the availability of fiscal budget for other social services).

Across the globe, governments have adopted different approaches to finance fuel subsidies. Fiscal transfers dominate in Sub-Saharan Africa and Latin America, where many governments directly fund subsidies through the state budget. In Europe and Central Asia, tax reductions on fuels are more prevalent, offering immediate consumer relief but at the cost of significant revenue losses for the government. In the Middle East and North Africa, off-budget subsidies like foregone tax revenues from state-owned oil companies are more common, obscuring the true costs of supplying the domestic market. These diverse methods highlight regional economic priorities but also underscore the shared fiscal risks and transparency challenges of subsidizing fuels.

Key Recommendations[3]

In countries that regulate fuel prices it is imperative to regularly update prices based on the fuel pricing formula and to periodically review the components in the formula. Frequent and transparent price adjustments help prevent fiscal imbalances, reduce market distortions, and build public acceptance over time by normalizing price changes. To insulate pricing policy from short-term political interference, regulatory bodies in charge of setting fuel prices should be technical bodies comprised of highly skilled personnel in energy and fiscal matters. This report's analysis finds that countries that revise pump prices on a weekly or monthly basis pass-through the changes in international prices onto domestic consumers more and have fewer instances of fuel market disruptions compared to those that revise prices less frequently.

3 These key recommendations are not standalone solutions. They are complementary and can be combined or implemented simultaneously to enhance the effectiveness and sustainability of fuel subsidy reforms. Governments may adopt multiple strategies based on their specific economic conditions, political landscape, and institutional capacity to ensure a balanced and well-managed transition.

During periods of elevated oil prices, governments need to be cautious of introducing sticky "band-aid" measures that may have unintended and counterproductive consequences. Once introduced, subsidies are difficult to eliminate as the population becomes accustomed to subsidies, and there can be political sensitivities regarding their removal. The experience of countries that successfully phased out temporary price controls and subsidies in 2022 offers valuable lessons. Their experience indicates that if a temporary subsidy or price control is introduced, it is crucial to clearly define upfront: (i) the conditions or timeline for terminating the subsidy, including criteria for potential extensions (for example, import prices 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, a fuel stabilization fund, or oil export revenue, if available).

Moving from universal fuel subsidies to targeted and robust social protection measures is critical. Countries that already had targeted subsidies in place in 2022 (for example, the Philippines) were able to quickly and effectively scale those measures to mitigate the impact of rising oil prices on vulnerable populations. In contrast, many countries that provided universal fuel subsidies faced significant difficulties maintaining these measures as their costs ballooned in 2022. Some countries faced fuel shortages because domestic oil companies were unable to pay for imports. There were also increased reports of fuel smuggling. In 2022, 35 countries reported fuel in-smuggling, where subsidized fuels from neighboring countries were illegally brought into the country, while 24 reported fuel out-smuggling, where fuel was illegally exported to benefit from higher prices elsewhere. Additionally, some governments did not have any fiscal space to finance fuel subsidies and had to resort to borrowing from domestic or international lenders.

Governments undertaking subsidy reforms should leverage global data and frameworks to create transparent and lasting policies that build on lessons learned from previous reform episodes. While there is no one-size-fits-all approach to reforming subsidies, important insights and best practices from past reforms can guide decision-making. Independent regulators play a crucial role in implementing and maintaining fair pricing mechanisms, ensuring that reforms remain effective and protected from political cycles. International frameworks and toolkits collectively offer governments a robust foundation to design and implement effective energy subsidy reforms. The World Bank's new ***Global Fuel Prices Database*** and the ***Global Fuel Subsidies and Price Control Measures Database*** aim to fill a current void in this space as there is a dearth of comprehensive data and information on the types of fuel pricing mechanisms and fuel subsidies as well as the fuel market conditions across countries. The World Bank will maintain the databases and update them at minimum on an annual basis. All data will be published on the dedicated website and made publicly available to add to the global knowledge base on fuel subsidies and pricing mechanisms.

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SECTION 1:
CONTEXT & MOTIVATION

Global oil prices experienced significant volatility in recent years (Figure 1), influenced by a variety of factors, including geopolitical events, economic shifts, and supply-demand dynamics. Prices collapsed during the COVID-19 pandemic as the global economy slowed, only to rebound dramatically as the economic recovery increased energy demand. This rebound was further fueled by supply shortages and geopolitical shocks, such as Russia's invasion of Ukraine, which led to significant shifts in global oil trade flows. Between December 2020 and June 2022, oil prices rose by 118 percent (in real terms).[4] Although prices have come down from their 2022 highs, they remain elevated due to ongoing geopolitical tensions, macroeconomic instability, and supply chain disruptions across the energy sector. Box 1 presents some of the main drivers behind these recent disruptions, highlighting the issues that shape the global oil market today.

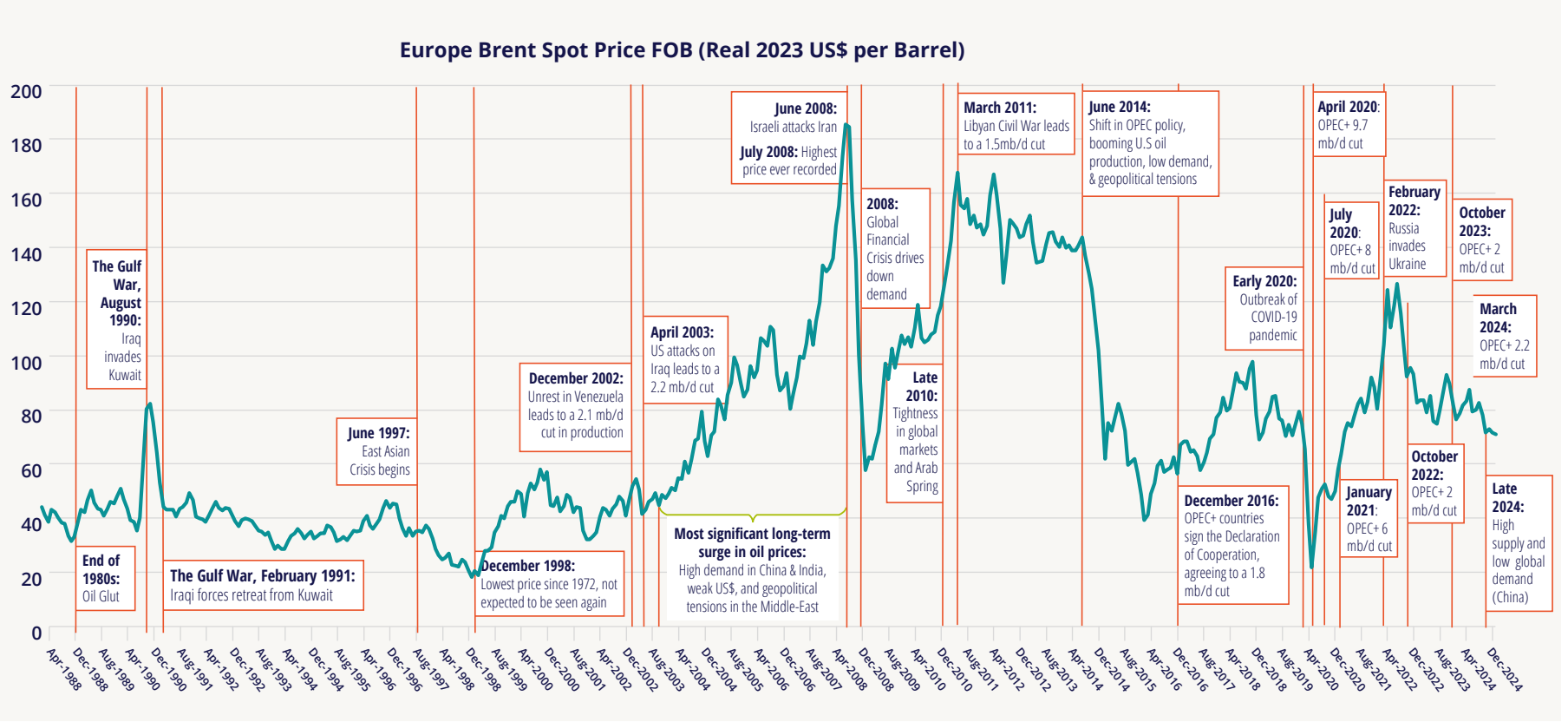
In response to the surge in oil prices in 2022, many countries introduced, expanded, or reintroduced previously eliminated broad-based, untargeted subsidies to protect consumers from soaring costs. This led to a global proliferation of liquid fuel[5] subsidies and price controls, as governments tried to reduce, redistribute, or delay the impact of rising and volatile energy prices on consumers (Figure 2).[6] In countries with 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 (i) reversed subsidy reform policies, (ii) delayed planned subsidy reforms, or (iii) introduced price subsidies for the first time.

4 Throughout this report, prices in local currency units are converted to US$ and adjusted for inflation to reflect their real value in 2023 dollars. Prices in local currency units are converted to US$ using the average exchange rate for the relevant year. The Consumer Price Index (CPI) is used to express the US$ values in real terms for 2023. CPI data is obtained from Federal Reserve Economic Data, 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.

5 Liquid fuels include petroleum products such as gasoline, diesel, kerosene, LPG, and HFO.

6 In parallel, subsidies on natural gas and electricity also increased in 2022. However, this report focuses solely on liquid fuel pricing mechanisms and subsidies, as the data collection was specifically centered around liquid fuels.

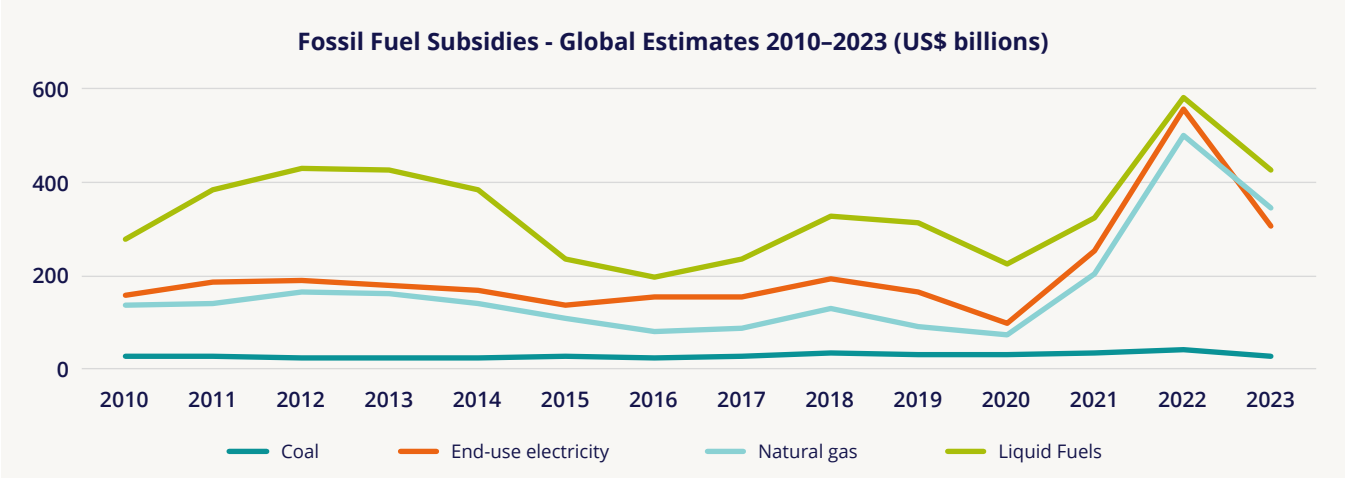
Figure 1: Brent Crude Oil Spot Price 1987-December 2024 (2023 US$)



Source: ***EIA- Europe Brent Spot Price FOB (Dollars per Barrel)***

Fuel subsidies are measures designed to reduce the cost of fuel for consumers or to support energy producers.[7] These subsidies operate at various points in the fuel production and consumption value chain to lower end-user prices. 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.

Figure 2: Fossil Fuel Subsidies 2010 – 2023



Source: ***Fossil Fuel Subsidy Tracker***[8]

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.

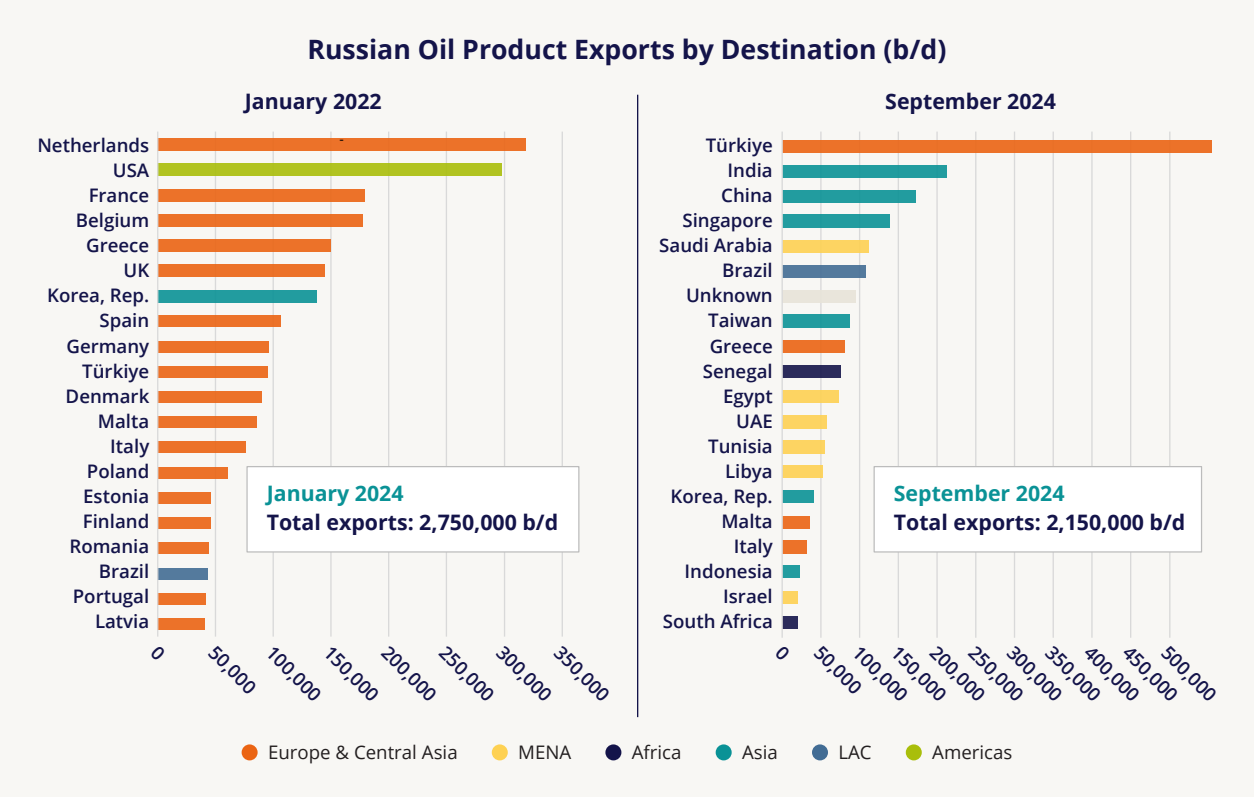
8 The Fossil Fuel Subsidy Tracker compiles data from multiple sources (International Energy Agency, Organisation for Economic Co-operation and Development, and International Monetary Fund), each using distinct methodologies that highlight different aspects of fossil fuel subsidies, offering valuable insights while reflecting variations in scope, policy transparency, and subsidy definitions. Subsidies increase alongside oil prices, reflecting the trend in Figure 1. The Tracker is updated with the most recent subsidy data from the Organisation for Economic Co-operation and Development and the International Energy Agency, covering 83 economies in 2024. Global data, covering 192 economies, is available until 2022.

Box 1: Main Drivers of Oil Price Volatility Since 2022

Oil prices rose significantly in 2022 and have fluctuated since due to a range of factors outlined below.

Global oil trade routes shifted. Russia's invasion of Ukraine in 2022 led to significant shifts in the global oil markets due to a series 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 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



Source: S&P Global Commodity at Sea

Transportation costs rose. 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 2024b).

Governments often justify subsidies as tools to stabilize economies, reduce energy poverty, or support energy-intensive industries. However, these measures often come with significant trade-offs. Subsidies incentivize fossil fuel consumption and production, exacerbating climate change and environmental degradation (IISD 2019). By increasing fossil fuel use, subsidies contribute to worsening air quality, leading to negative public health impacts, particularly in urban areas with high vehicle emissions. Largely driven by fossil fuel combustion, poor air quality remains a major global health issue, contributing to respiratory diseases and premature deaths worldwide (World Bank 2023a). A recent World Bank study estimated that removing explicit fossil fuel subsidies could prevent approximately 360,000 deaths linked to air pollution by 2035, though additional measures will be needed to fully address the health burden of fossil fuel use (Damania et al. 2023). Moreover, subsidies distort markets by keeping fossil fuel prices artificially low, discouraging investment in cleaner energy alternatives and energy efficiency (Kojima 2017). Subsidies are also regressive, disproportionately benefiting wealthier populations who consume more energy than poorer households (Coady et al. 2015).

Beyond economic inefficiencies, subsidies strain public finances, creating long-term fiscal burdens, especially in countries with weak oversight. Weak governance in these contexts often leads to illegal trade in fuels, fraud, and resource misallocation, compounding the financial strain on governments. The fiscal burden of subsidies grew substantially in 2022 in response to the oil price surge, with global fossil fuel consumption subsidies exceeding US$1.2 trillion in that year, according to the International Energy Agency (IEA 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 International Energy Agency (IEA).

The stakes could not be higher. Fossil fuels continue to dominate the global energy landscape, accounting for more than 80 percent of energy consumption over the past two decades (Perkins and Edwardes-Evans 2023). High fossil fuel prices have led major oil and gas producers to dilute their plans to diversify away from fossil fuels. Adding to this issue is the growing financial burden of fuel subsidies. In 2022 alone, many governments implemented measures such as fuel tax reductions and direct subsidies to offset the spike in prices. These measures provided temporary relief but came at the expense of long-term fiscal sustainability and distortions in the domestic fuel market.

Having readily available and regularly updated data is crucial to advance knowledge and inform policy on fuel pricing and subsidies. One of the hurdles to assessing regional or global responses of domestic fuel prices to international oil price movements has been the lack of comprehensive and high-frequency time series and cross country data on retail fuel prices as well as up-to-date country-specific information on domestic fuel regulations and market conditions.

This report draws on two global databases newly developed by the World Bank that bridge this important public information gap. Currently there are no freely available time-series databases of fuel retail prices at a global level. The World Bank's ***Global Fuel Prices Database*** is the most comprehensive publicly available time-series data set to date in terms of frequency, time horizon, country coverage, and diversity of fuel products. The database contains monthly data on retail prices of regular gasoline (research octane number (RON) below 95), premium gasoline (RON of 95 or above), diesel, kerosene, liquid petroleum gas (LPG) for automobiles, bottled LPG, heating oil, and heavy fuel oil (HFO) for the period between December 2015 and January 2025. The data were manually collected from monthly price announcements or price surveys from the websites or social media of petroleum agencies, ministries of finance, ministries of energy, and statistical offices.

There is also no single source of comprehensive data and information on the type of fuel pricing mechanisms, fuel subsidies, and fuel market conditions across countries. To fill this data gap, the World Bank 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 2024. The data were collected in English and in local languages using publicly available sources, including the websites of ministries of energy, ministries of finance, central banks, petroleum regulatory authorities, international sources (for example, the IEA), and local and international news articles. Going forward, both databases will be maintained on an annual basis to add to the global knowledge base on fuel subsidies and pricing mechanisms.

The databases provide a free, centralized, real-time resource that enables quick access to up-to-date information without relying on fragmented or costly subscription-based sources.

Policymakers can use the data to track fuel price trends globally as well as within their geographic region. They can evaluate fuel market conditions, fuel regulations, and subsidy schemes to make informed decisions. Researchers can use the data to compare fuel pricing and subsidy systems across countries, gaining a clearer picture of global fuel markets. The databases are also valuable for international organizations and development agencies seeking reliable, consistent data to guide their work in fuel pricing and subsidy policy. Together, these databases serve as an important tool for advancing knowledge and informing fuel pricing policy.

Drawing on these two databases, this report:

- Provides a global stock-take of the different types of price controls and subsidies countries have used in recent years.[9]
- Analyzes the degree to which domestic fuel prices reflect international oil price changes.[10]
- Reviews the challenges countries face as a result of non-cost-reflective fuel prices (for example, fuel shortages, black markets, and smuggling).
- Examines the current state of fuel subsidy reforms and distills key recommendations for countries currently considering such reforms.

This report provides a global stock-take of how countries have regulated fuel prices, implemented price controls, and managed subsidies in response to the 2022 fuel price spike. Drawing from past experiences and current reforms, it 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 report is structured as follows:

- **Section 2** takes stock of global fuel subsidies and price regulation from 2021 to 2025, analyzing how over 150 economies have managed fuel prices. It identifies key trends across regions, income levels, and energy trade profiles.
- **Section 3** examines the state of fuel subsidy and price controls reforms since 2021, focusing on countries that have reformed, delayed, or reversed these policies. It offers actionable recommendations, highlights best practices, and provides country examples to guide policymakers in crafting sustainable and equitable energy policies.

9 For more details, please see the accompanying background paper: Global Stock-take of Fuel Subsidies and Pricing Policies.

10 For more details, please see the accompanying background paper: A Global Assessment of Domestic Petroleum Fuel Prices.

02

SECTION 2:

GLOBAL STOCK-TAKE OF FUEL SUBSIDIES & PRICING MECHANISMS FROM 2021-2025

The period from 2021 to 2025 has been marked by several significant events, including the recovery from the COVID-19 pandemic and major energy price disruptions due to geopolitical tensions. The spike in oil and gas prices in 2022 prompted governments to implement a variety of fuel subsidy and pricing measures, each with distinct impacts on domestic fuel markets. This section provides a comprehensive global stock-take of fuel pricing mechanisms and subsidies, examining their evolution between January 2021 and January 2025. While it offers a detailed overview of fuel pricing trends over this period, it does not aim to cover all pricing approaches over time. Instead, it focuses on how the events of this recent volatile period have shaped fuel pricing and subsidy policies.

Most developing countries regulate fuel prices; those that adjust prices infrequently face significant distortions in their domestic fuel market

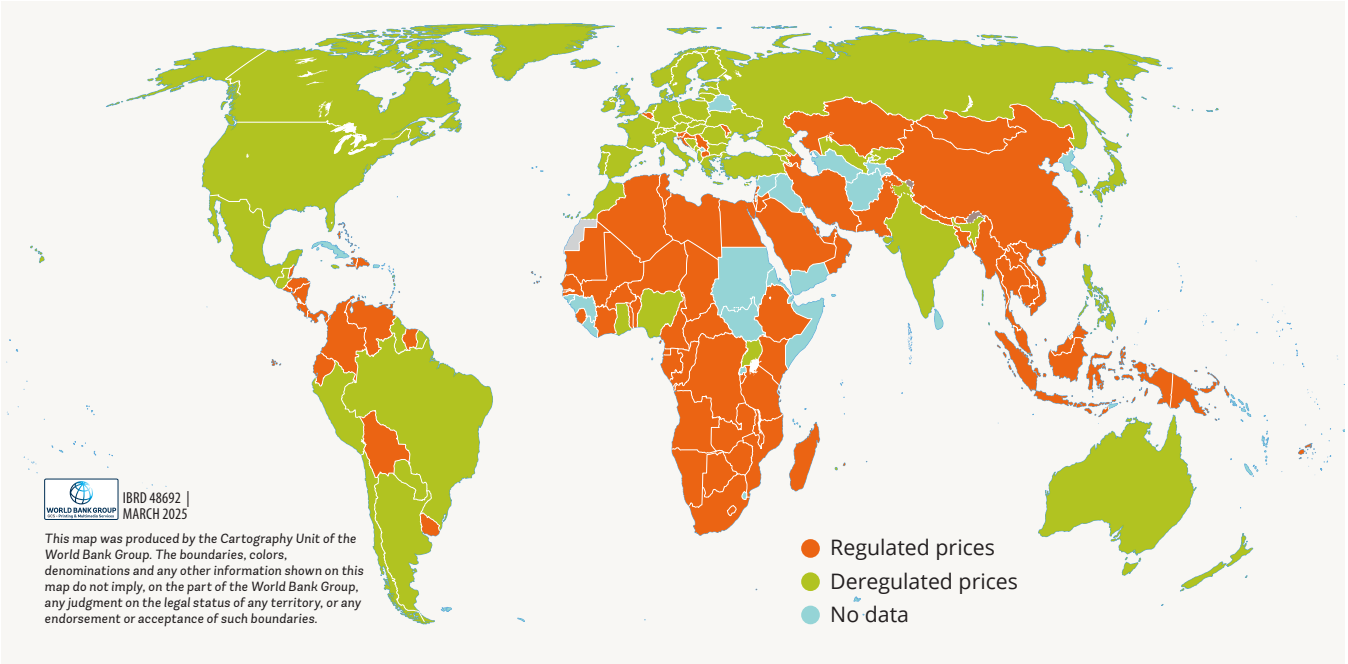
Governments follow a range of pricing policies for the domestic prices of petroleum products. Some countries, mainly advanced economies, have deregulated fuel prices, allowing them to be driven by market forces. By contrast, in countries with fuel price regulation, the government—typically through a ministry or an agency—sets fuel prices using a formula. Some countries have deregulated prices for certain fuels but regulate prices for others. For example, in Ecuador the price of premium gasoline is deregulated but all other fuel prices (for example, regular gasoline, diesel, and LPG) are controlled by the government. The Agency for the Regulation and Control of Energy and Non-Renewable Natural Resources publishes monthly prices for the regulated fuels.

Competitive fuel markets can improve efficiency, price transparency, and service delivery, but true competition remains limited in many developing countries. Market failures, governance challenges, and a lack of sufficient competition mean that price regulation is still utilized in

many economies to protect consumers and balance the interests of governments, investors, and the public. As of January 2025, less than half of the 154 economies studied in this report have deregulated fuel prices (Figure 4). In these countries, prices are primarily driven by market forces, with a regulatory agency or governmental body monitoring the fuel sector to ensure prices reflect market realities and fair competition. Fuel price deregulation is more common in advanced economies. Ensuring effective competition in fuel markets requires clear policies and institutional reforms, such as reducing entry barriers, increasing market transparency, and strengthening regulatory oversight.[11]

In some countries, fuel prices are officially deregulated but still subject to government intervention to influence domestic pump prices. For example, although fuel prices in Russia are deregulated, the government uses interventions in the upstream oil segment as a form of price control. There is a "damper" payment to domestic refineries to encourage them to sell their products on the domestic market instead of exporting them. A few countries with historically deregulated fuel prices reregulated prices in 2022 to mitigate the impact of rising oil prices over a prolonged period of time or to avoid a sharp increase in prices (Box 2).

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



Source: ***Global Fuel Subsidies and Price Control Measures Database*** (World Bank 2025b)

Note: Some countries deregulated a few fuels but still regulate others. In the database a country is coded as "deregulated" if both diesel and gasoline (of all grades) prices are deregulated. 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 (for example, 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.

11 More detailed discussions on these factors can be found in IMF (2020). ***The Time Is Right! Reforming Fuel Product Pricing Under Low Oil Prices***; Cardoso, Leonardo C.B., Carlos Frederico A. Uchôa, Williams Huamani, David R. Just, and Raúl V. Gomez (2022). ***Price effects of spatial competition in retail fuel markets: the impact of a new rival nearby***; Koh, Kanghyok, Sungho Jean, and Jinhyuk Lee (2022). ***The effects of price competition on firms' operations and market price: Evidence from a retail gasoline market***; and Kojima, Masami (2013). ***Reforming Fuel Pricing in an Age of $100 Oil***.

Box 2: Countries That Reregulated Prices in 2022

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 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.

As of January 2025, fuel prices are set by the government in 95 out of the 154 economies examined in this report. The type of fuel price regulation varies significantly among this group of countries. More than half of the countries with regulated fuel prices review and adjust them on a periodic basis. The longer the period between adjusting prices the higher the risk that domestic prices will become decoupled from international price movements. Some countries freeze fuel prices for months or years, mostly in Sub-Saharan Africa and the Middle East and North Africa regions (Table 1). Freezing fuel prices for prolonged periods can cause major distortions in the fuel market and lead to a substantial increase in subsidy costs (Box 3).

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
Quarterly	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)

Box 3: Unintended Consequences of Freezing Fuel Prices

Fuel shortages induce illegal trade in fuels: The Central African Republic is fully reliant on imports of refined petroleum products. The government regulated all fuel prices and froze them between January 2016 and January 2023. On January 3, 2023, gasoline prices were 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.

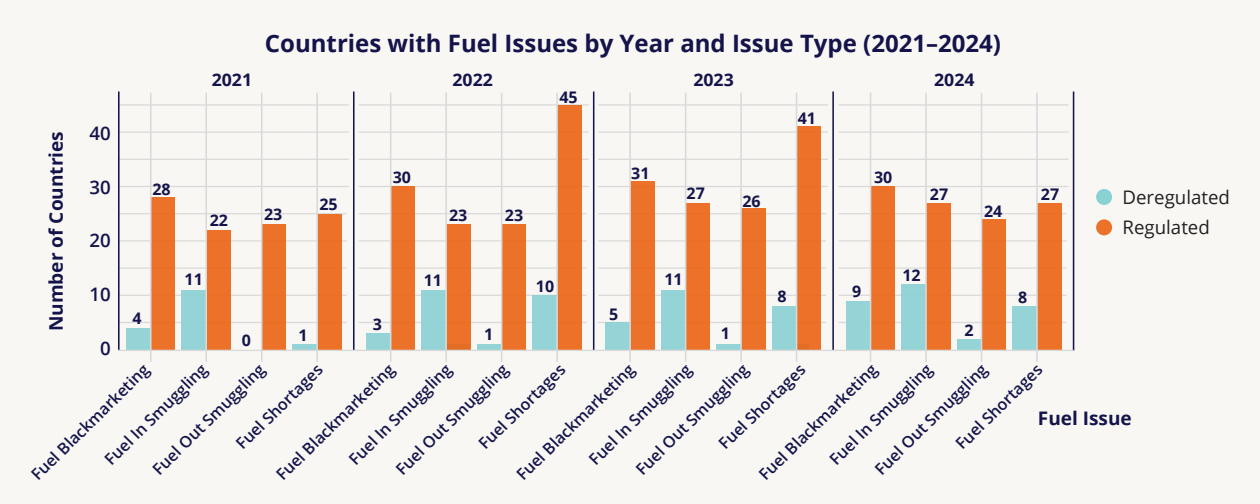
Fuel smuggling leading to financial losses for oil producers: Algeria is an established oil producer with a significant domestic refining capacity. The prices of liquid fuels are regulated by the government and have been frozen for several years. Gasoline and diesel prices have been frozen since June 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 a 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 running losses in 2022 as the regulated prices did not cover their costs, resulting in several instances of countrywide fuel shortages. As a result, 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.

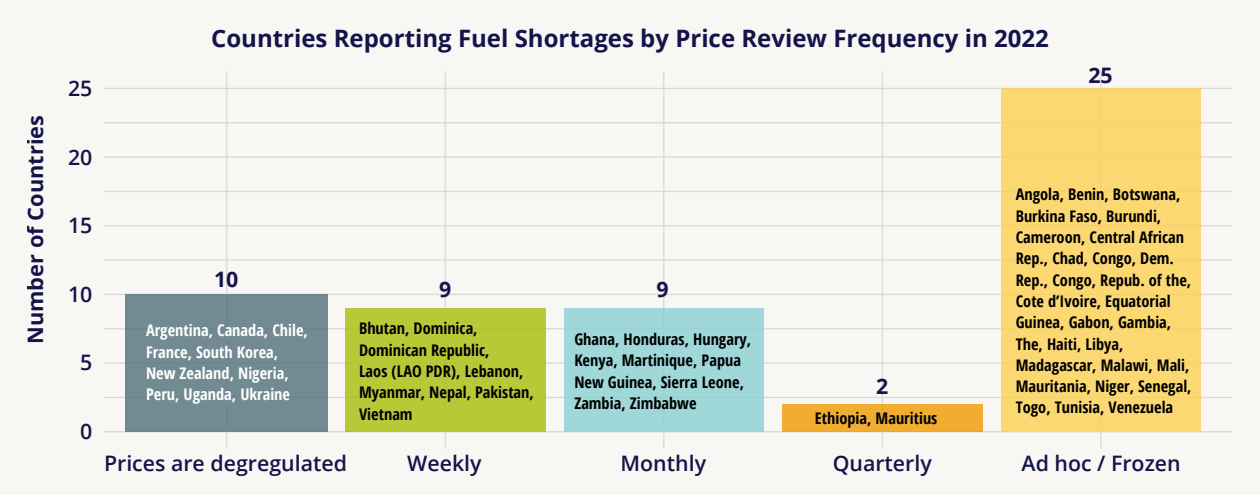
Overall, countries with regulated fuel prices had more instances of fuel price subsidies, fuel shortages, black marketing, and smuggling (Figure 5). In 2022, number of countries reporting fuel market issues increased compared to 2021. The number of countries reporting fuel shortages nearly doubled in 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

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 and Occurrence of Fuel Shortages in 2022



Source: ***Global Fuel Subsidies and Price Control Measures Database*** (World Bank 2025b)

Most countries did not pass-through the rise in international oil prices in 2022 onto domestic prices

Some countries fully pass through global price movements to domestic end-user prices, while some freeze domestic fuel prices for long periods of time. Fuel subsidies emerge or grow if domestic prices significantly diverge from international prices during periods of rising international oil prices. Examining the level of pass-through to domestic consumers is a useful tool for assessing how different countries responded to rising oil prices in the past few years (Box 4).

Box 4: Calculating International Fuel Price Pass Through

The degree to which international fuel prices are transmitted to the domestic market can be assessed by comparing the change in international fuel prices to the change in domestic retail prices of fuels. Utilizing the ***World Bank's Global Fuel Prices database***, the pass-through of international oil price fluctuations onto domestic consumers for eight types of fuel was calculated from December 2017 to November 2024.

The methodology used follows a similar approach to Kojima (2009, 2012), where changes in retail fuel prices paid by consumers in each country are compared to corresponding changes in international fuel prices,[12] using the following formula:[13]

$$\frac{\left(\text{Retail fuel price (in } \frac{LCU}{liter}\text{)}_{\text{June 2022}} - \text{Retail fuel price (in } \frac{LCU}{liter}\text{)}_{\text{April 2020}}\right)}{\left(\text{International fuel price (in } \frac{LCU}{liter}\text{)}_{\text{May 2022}} - \text{International fuel price (in } \frac{LCU}{liter}\text{)}_{\text{March 2020}}\right)}$$

The equation above shows that benchmark fuel prices are lagged by one month to provide retail prices with adequate time to adjust to changes in global prices, as shipping, storage, and transportation of fuels take time. The actual lag is likely to depend on the size of the economy since smaller economies tend to import fuels less frequently (for example, every few months).

For full pass-through, the pass-through coefficient should generally be higher than 1, since in addition to the increase in the cost of procuring the fuel itself, other costs would also increase, including the cost of transporting the fuel to the market. It is important to note that the calculations do not capture whether the full impact of higher or lower refined product prices have been transmitted to the domestic market. They examine only the changes in costs outside the domestic

12 The fuels analyzed include two grades of gasoline, diesel, kerosene, HFO, heating oil, bottled LPG, and automotive LPG. All the international price benchmarks used in the analysis by region and fuel are provided in Appendix 1 of the accompanying background paper: A Global Assessment of Domestic Petroleum Fuel Prices. These were matched to each country in the analysis based on the proximity of the benchmark fuel's cargos to the country.

13 A full explanation of the methodology can be found in the accompanying background paper: A Global Assessment of Domestic Petroleum Fuel Prices.

market and do not account for changes in domestic supply costs, taxes, or fees.[14] Due to these foregoing limitations, pass-through coefficients need to be interpreted with caution. The pass-through coefficients may enable qualitative, but not necessarily quantitative, assessment. A pass-through coefficient of less than 1 does not necessarily indicate a subsidy, fuel tax reductions, or financial losses by oil marketing companies. Conversely, a pass-through coefficient greater than 1 does not mean that consumers were over-charged, that taxes and other fees were increased, or that international fuel price changes were fully passed on to consumers. If starting prices were subsidized to begin with, increasing domestic prices by more than the percentage changes in international prices may still leave domestic prices subsidized.

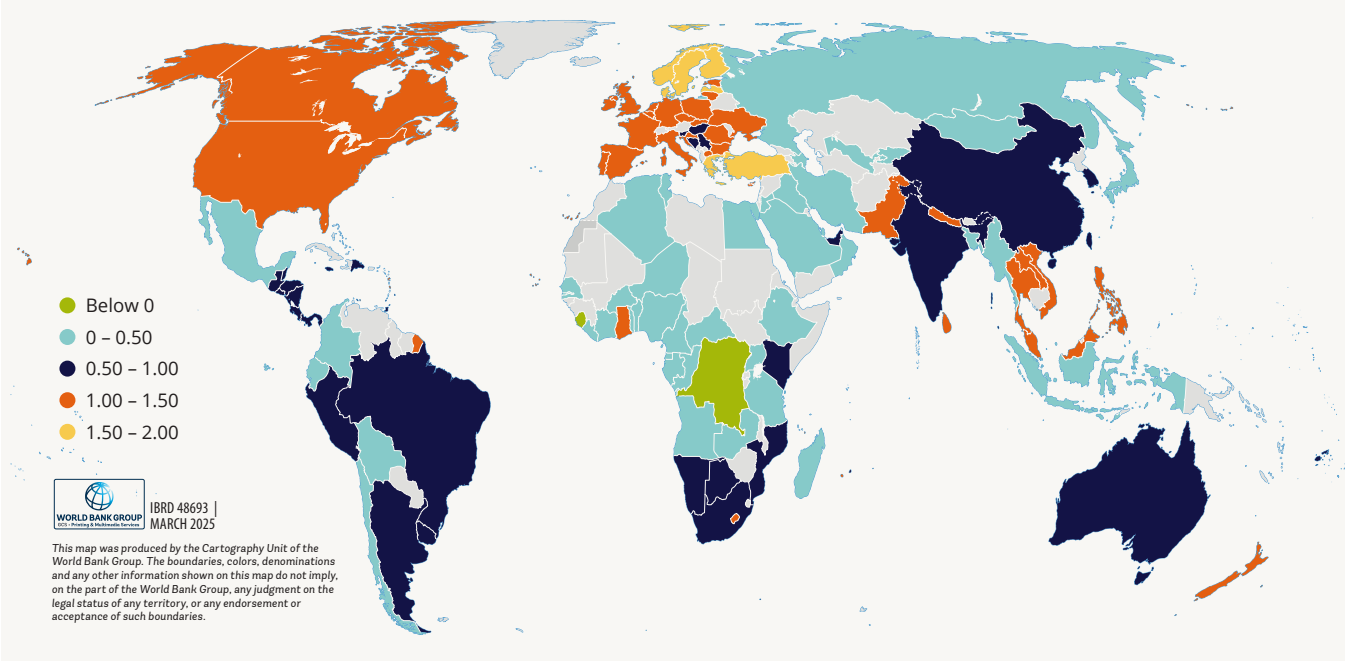
This report focuses on the period from April 2020 to June 2022, as it captures government responses to significant fuel price fluctuations during two critical global events: the COVID-19 pandemic and the subsequent energy crisis following Russia's invasion of Ukraine. April 2020 marked the lowest Brent crude oil price since 1999 due to the pandemic, while June 2022 represented the peak of oil prices since 2014, driven by post-pandemic demand recovery and geopolitical tensions. The selection of these dates allows for an analysis of how governments adjusted fuel prices amid extreme price volatility. A broader analysis covering other time periods, including December 2017 to April 2020 and June 2022 to December 2023, can be found in the accompanying background paper, A Global Assessment of Domestic Petroleum Fuel Prices.

14 Free on Board prices reflect the cost of fuel at the point of export but do not account for additional expenses incurred during transportation and delivery, such as shipping and insurance costs, and evaporative losses. Additionally, the cost of financing fuel imports can be significant in some countries, further impacting domestic fuel prices.

The analysis of the price pass-through coefficients for the period April 2020 to June 2022, when fuel prices rose significantly, reveals that most countries did not pass through the increase onto their domestic prices.[15] For gasoline, both the average and median price pass-through coefficients for this period were below 1 for the whole sample, indicating that the rise in international prices was not fully passed onto domestic consumers (Figure 7). All the low-income countries in the sample had coefficients well below 1 for this subperiod, suggesting that these countries subsidized gasoline prices. Nearly all countries with regulated gasoline prices did not fully pass through the rise in international prices to their pump prices.

15 These dates were chosen to ensure sufficiently large price differences to provide confidence in the qualitative trends observed. The price differences between these periods are large enough to minimize noise in the data, making it easier to isolate the impact of price changes from other factors. For details on the methodology please see the accompanying background paper.

Figure 7: Level of Gasoline Price Pass-Through (April 2020 - June 2022)[16]



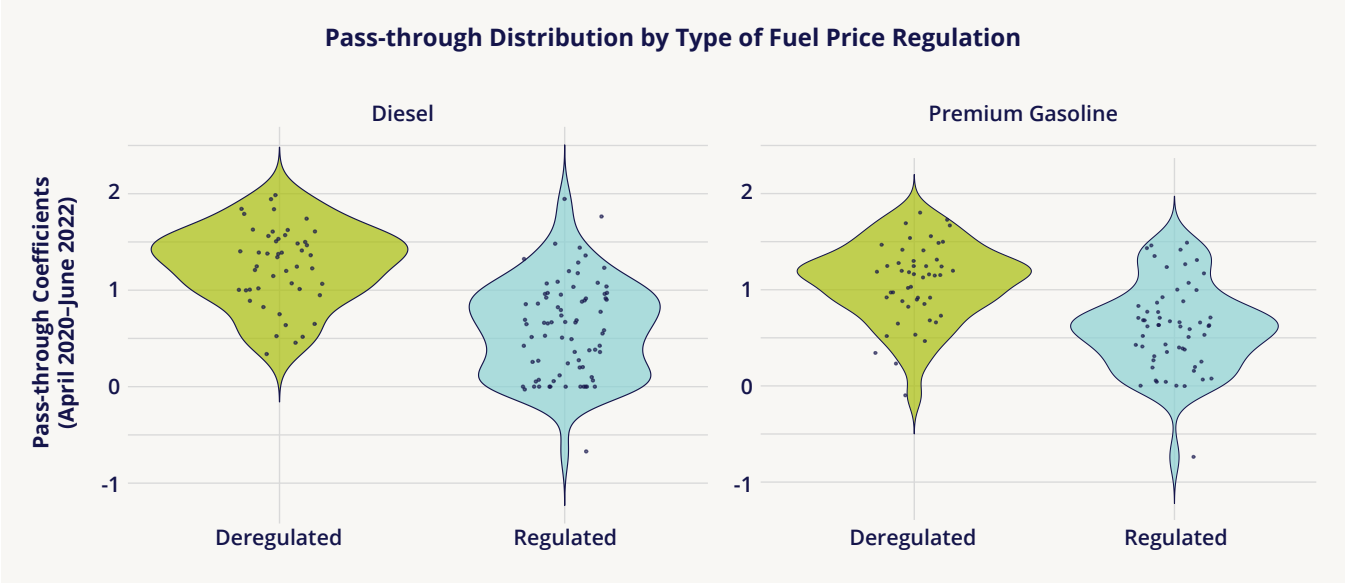
Source: ***Global Fuel Prices Database*** (World Bank 2025a)

Higher-income countries were more likely to pass through the increases in international oil prices compared to other income categories because these countries have deregulated prices that follow market dynamics closely. Across all fuels, the price pass-through coefficients for countries with deregulated prices were multiple times higher than for countries with regulated prices (Figure 8). However, there were several countries with regulated prices that tracked international fuel prices as closely as deregulated markets. This variation suggests that additional factors, such as the design of pricing mechanisms, regulatory enforcement, and broader market conditions, also influence pass-through levels. In general, low-income countries had the lowest pass-through coefficients and nearly all of these countries (for example, Burkina Faso, Madagascar, Sierra Leone, and Togo) have regulated fuel prices.[17]

16 The underlying data analysis benefited from support from the Energy Sector Management Assistance Program (ESMAP). The financial support of ESMAP is gratefully acknowledged. ESMAP is a partnership between the World Bank and over 20 partners to help low- and middle-income countries reduce poverty and boost growth through sustainable energy solutions. ESMAP's analytical and advisory services are fully integrated within the World Bank's country financing and policy dialogue in the energy sector.

17 Liberia and Uganda are the only low-income countries with deregulated prices. Within the lower-middle income group Morocco and the Philippines are the only countries with deregulated fuel prices while Ghana and Nigeria are the only countries where some fuels are deregulated.

Figure 8: Gasoline and Diesel Price Pass-through Distribution – Regulated vs. Deregulated Prices



Source: ***Global Fuel Prices Database*** (World Bank 2025a)

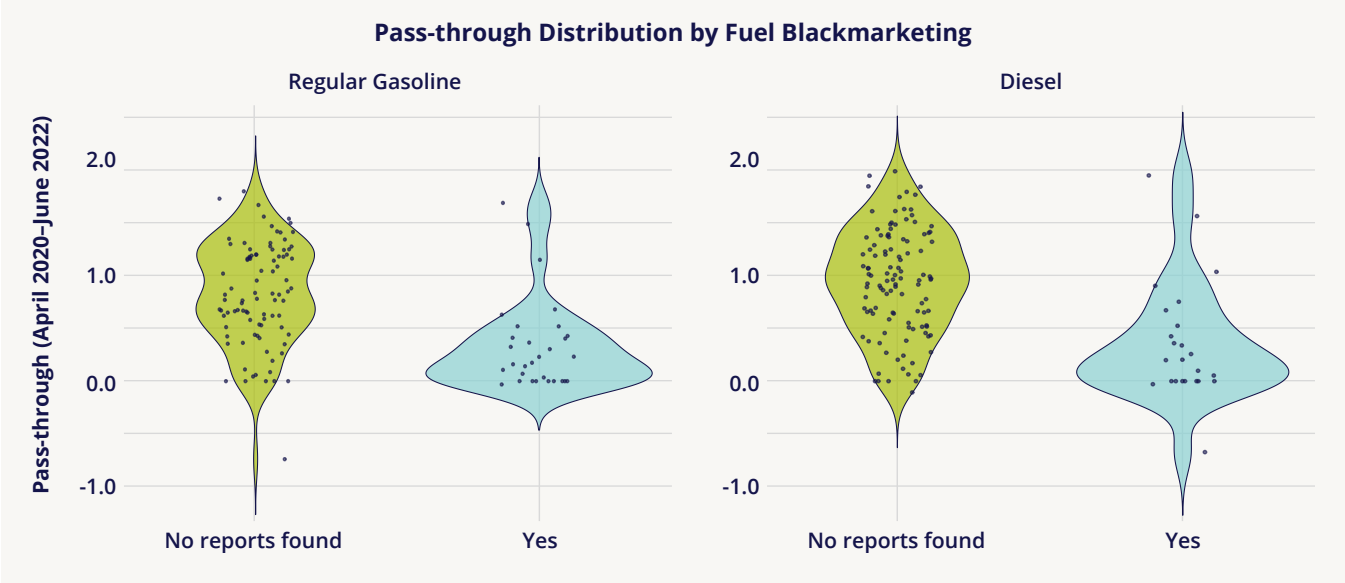
The frequency of fuel price adjustments in regulated markets emerges as another important factor. On average, countries that calculate and revise pump prices on a weekly or monthly basis had higher levels of pass-through compared to those that revise prices less frequently. As expected, countries that froze fuel prices for extended periods of time had the lowest price pass-through coefficients.

A closer look at domestic fuel market conditions further reinforces this pattern. A larger share of countries that reported fuel shortages, smuggling, and black-market activity in 2022 had pass-through coefficients below 0.8 for most fuels (Figure 9). This finding aligns with expectations, as artificially low fuel prices often create distortions that encourage illicit trade and supply imbalances. However, this is only an observed trend rather than a direct causal relationship, as fuel market disruptions can also arise from external shocks, supply chain constraints, and policy interventions beyond price regulation.[18]

To test the robustness of these findings, a sensitivity analysis was conducted across four additional time periods: December 2017 to April 2020, June 2022 to December 2023, December 2017 to December 2023, and November 2022 to November 2024. The results confirm that deregulated markets consistently exhibit higher pass-through coefficients, but the relationship between fuel shortages, smuggling, and black-market activity varies by period. Notably, these issues were most pronounced during April 2020 to June 2022—a time of extreme fuel price volatility, suggesting that external market conditions played a significant role.

18 The ***Global Fuel Subsidies and Price Control Measures Database*** sources data primarily from official government announcements, supplemented by international and local news reports and international organizations when official data is unavailable. Price regulation data is based on the frequency of announcements and legal reviews, while fuel supply conditions rely on qualitative sources such as news reports and law enforcement insights..

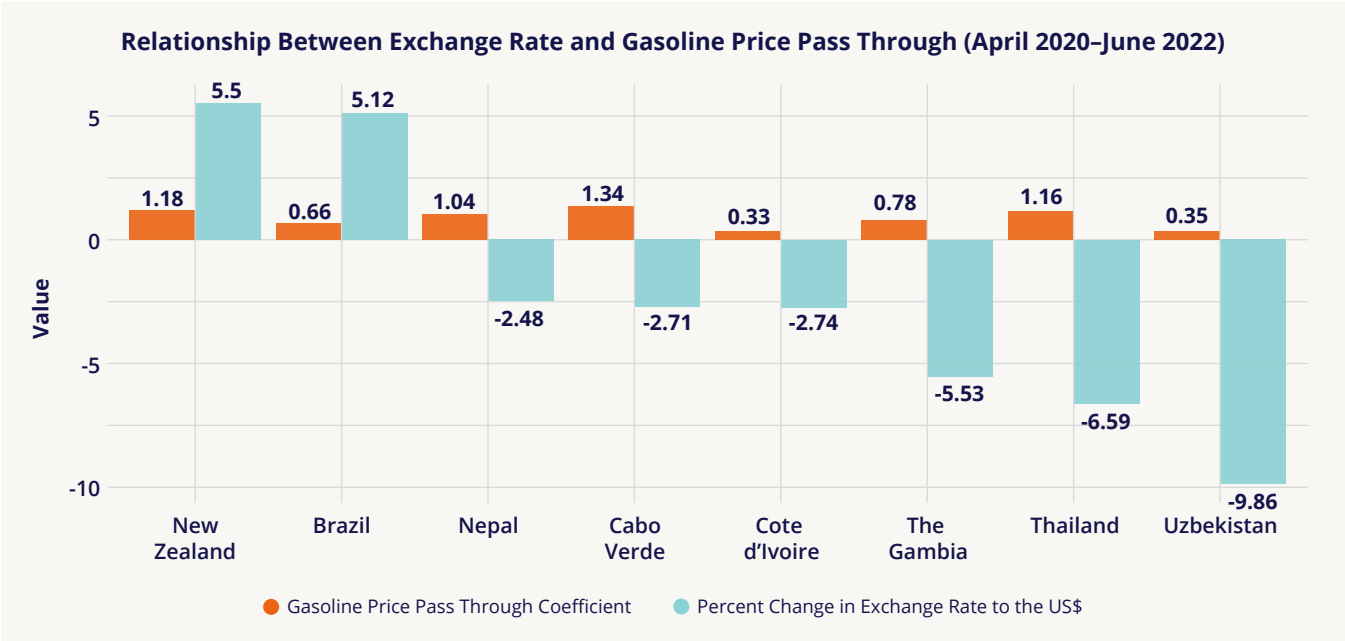
Figure 9: Gasoline and Diesel Price Pass-Through Distribution – Occurrence of Fuel Black Marketing



Source: ***Global Fuel Prices Database*** (World Bank 2025a)

Currency depreciation is associated with lower levels of pass-through across fuels. Depreciation can magnify the impact of rising international fuel prices on the domestic market. Governments may try to shield consumers by not passing through the full price increases, as currency depreciation increases the magnitude of price adjustments needed to cover the rise in prices. Overall, countries that experienced currency depreciation between April 2020 and June 2022 had lower price pass-through coefficients (Figure 10).

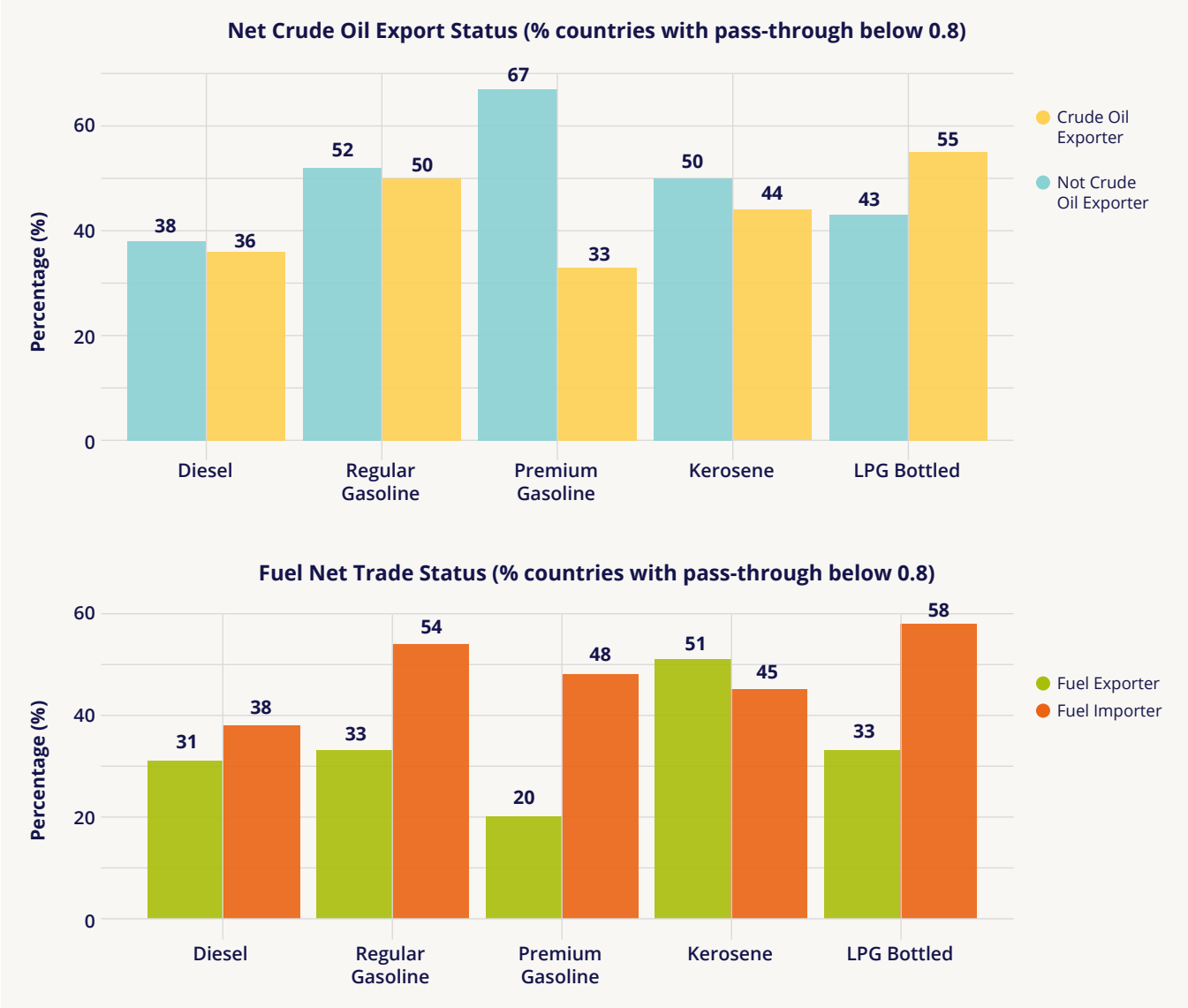
Figure 10: Exchange Rate Fluctuations and Gasoline Price Pass Through for Select Countries



Source: ***Global Fuel Prices Database*** (World Bank 2025a)

Past studies of fuel price pass-through have found that oil exporting countries tend to have lower fuel price pass-through coefficients. Interestingly, this report's analysis finds a more mixed trend (Figure 11). Looking at the sample of net crude oil exporters, there was no significant difference in the price pass-through coefficients for diesel and regular gasoline compared to countries that were net crude oil importers or that do not import crude oil (because there is no domestic refining capacity). For higher grade premium gasoline, a significant share of net crude oil exporting countries had price pass-through coefficients below 0.8 compared to non-exporters. The results are slightly different when considering the net trade status of each economy per individual refined fuel. Fewer net exporters of gasoline, diesel, and LPG had price pass-through coefficients below 0.8 compared to net importers of these fuels. The results indicate that fuel-exporting countries did not disproportionately subsidize domestic fuel prices during this period.

Figure 11: Net Oil Trade Status and Level of Price Pass-through



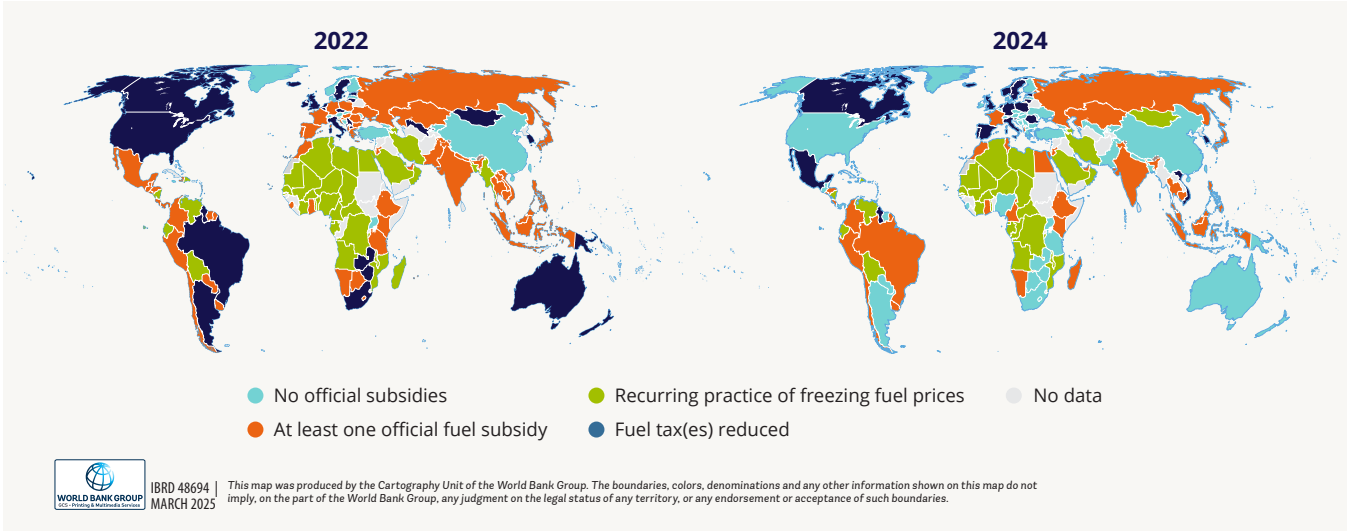
Source: ***Global Fuel Prices Database*** (World Bank 2025a)

Since 2021 governments have utilized an array of measures to subsidize fuel prices

As noted in the previous section, most countries did not pass through the rising fuel prices onto domestic pump prices in 2022. Since 2021, a growing number of governments have adopted various strategies to control and subsidize fuel prices, aiming to protect consumers from ongoing international oil price volatility. Some governments implement universal subsidies, where the subsidy is provided to all consumers, regardless of the income level or sector. In other cases, fuel subsidies are targeted to a certain sector (for example, agriculture or fisheries) or consumer groups such as public transport operators. Certain countries utilize conditional cash transfers, relying on sophisticated social protection mechanisms to assist low-income and vulnerable populations. Many governments deploy a mix of fuel subsidy measures. Notably, subsidy provisions are not limited to countries where the government regulates fuel prices. Even in deregulated fuel markets, governments may implement fuel subsidies indirectly, such as through foregone tax revenue.

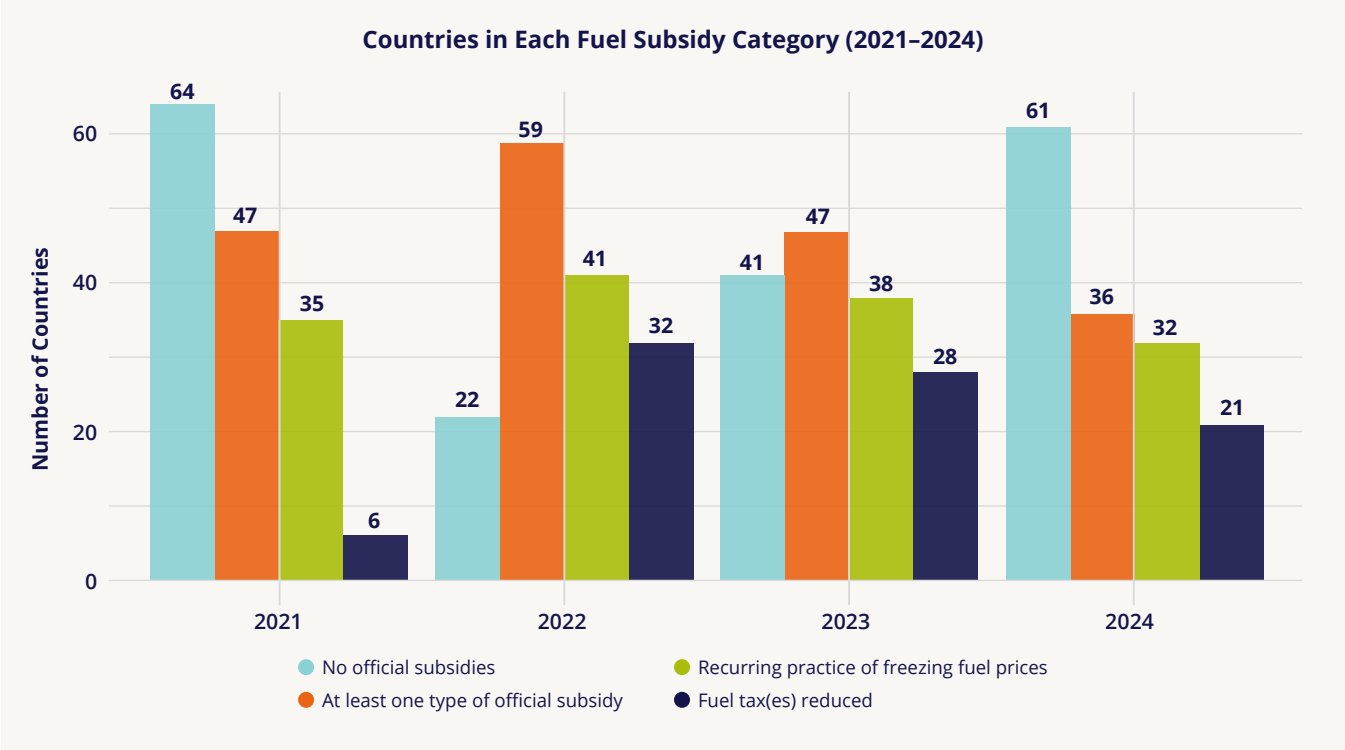
In 2022, 61 economies reduced taxes and import levies on fuels, while 59 had a form of official fuel subsidy, and an additional 41 froze fuel prices. Additionally, 29 countries used both tax reductions and price subsidies in 2022. Although these policies helped cushion the impact of rising international fuel prices on retail prices in the short term, they had significant negative repercussions on fiscal budgets and the domestic fuel market. By the end of 2024, some countries did eliminate the temporary measures, while others started reforming pre-existing subsidies (Figure 12 and Figure 13).

Figure 12: State of fuel subsidies January 2023 vs January 2025



Source: ***Global Fuel Subsidies and Price Control Measures Database*** (World Bank 2025b)

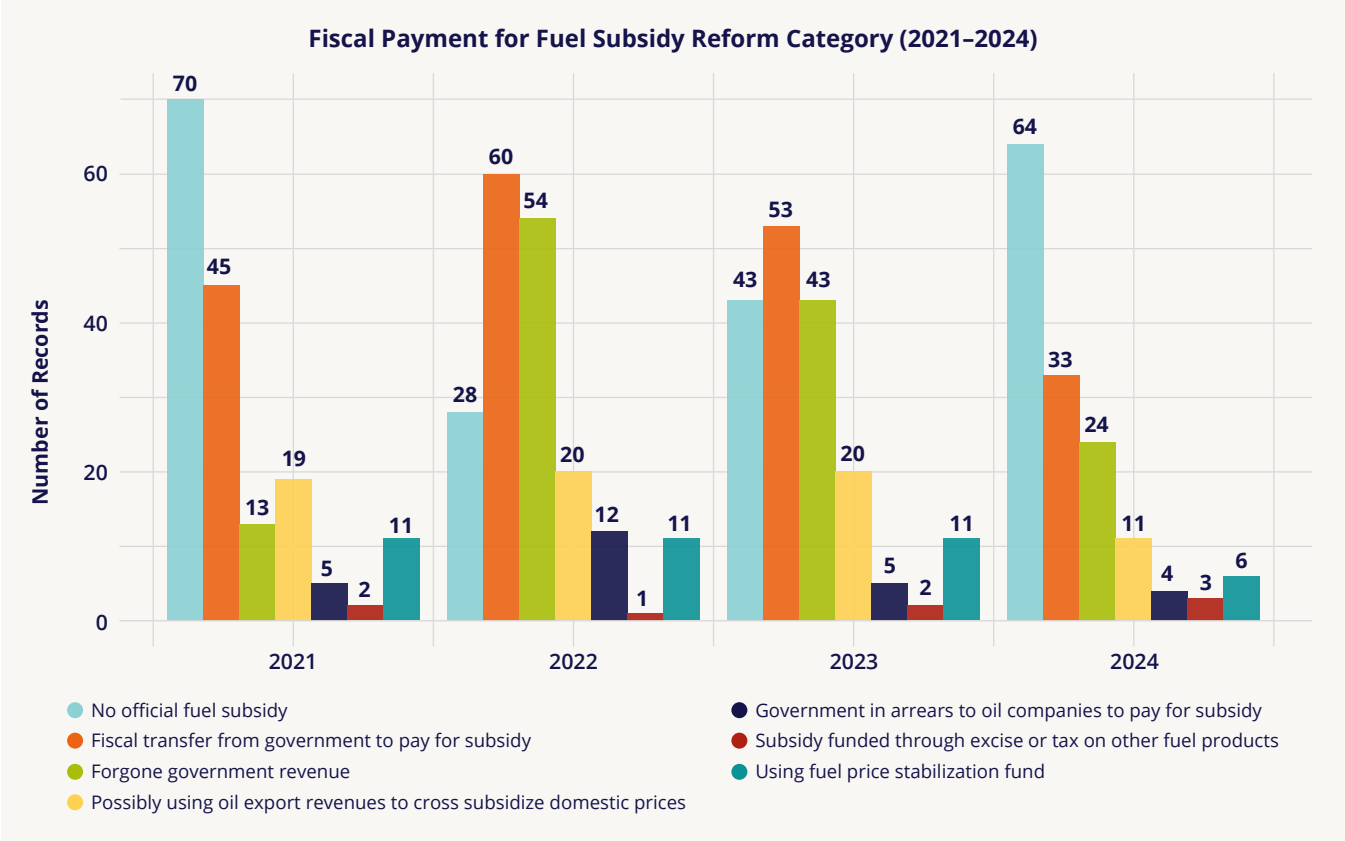
Figure 13: Number of Economies Utilizing Price Controls and Subsidies for Fuels (2021–24)



Source: ***Global Fuel Subsidies and Price Control Measures Database*** (World Bank 2025b)

Governments utilize a range of methods to pay for fuel subsidies. The most prevalent method is financing subsidies through the fiscal budget. Another approach is forgoing government revenue by eliminating or reducing fuel taxes. Both methods were increasingly used in 2022 (Figure 14). 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. The reduction of fuel taxes was a prominent measure adopted in 2022, used mainly in Europe and Central Asia (21 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, in August 2022, Botswana temporarily eliminated the tax on LPG for six months. By contrast, Brazil eliminated taxes on most fuels, resulting in a significant loss of tax revenue. Tax reduction measures can be sticky. Several countries that instituted fuel tax reductions in 2022 repeatedly extended these measures, with some still in effect as of 2025.

Figure 14: Methods of Paying for Fuel Subsidies (2021–24)



Source: ***Global Fuel Subsidies and Price Control Measures Database*** (World Bank 2025b)

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.

Import duties on crude oil and petroleum products are another important source of fiscal revenue. In 2022, several governments reduced these duties to mitigate pressure on domestic fuel prices. For example, the Argentine government authorized Cammesa, the operator of the wholesale power network, to increase the amount of diesel it could import under a tax-free scheme from 15.7 million barrels to 25.2 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.

Many countries that subsidize fuel prices provide **universal fuel subsidies through fiscal transfers to domestic oil companies**. Governments can provide a subsidy at any point along the fuel supply chain. Some provide subsidies to fuel importers or to fuel distributors, while certain oil-producing countries subsidize fuels by providing fiscal transfers to domestic refineries or upstream oil production companies (Box 5). These subsidies can be a pre-determined, regularly reviewed amount fixed in the fiscal budget or they can be non-transparent, with no clear budget line item, making it difficult to track the true fiscal cost.

Box 5: Subsidizing Fuel Prices through Fiscal Transfers to Domestic Oil Companies

Governments can subsidize fuel prices at any point along the fuel supply chain. Some provide subsidies to oil importers, others to domestic oil refineries, and some to oil retailers within the country. Examples are included below:

Cambodia – ongoing fiscal subsidy via retailers: The government regulates fuel prices based on a price formula in line with international prices. 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 except for the foregoing limited price subsidy, thereby keeping the costs of the subsidy in check.

Gabon – fiscal transfers to 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—the state-owned enterprise 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 – 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 the measure has been extended several times. In November 2024, the government announced plans to continue gasoline subsidies in 2025 with phased reductions. Japan's universal subsidy has faced criticism, as high-income individuals and corporations benefit from it despite not needing the financial assistance. Additionally, the fuel subsidy is seen as contrary to Japan's decarbonization goals.

Romania – temporary fiscal subsidy to retailers: Romanian fuel prices are deregulated. In 2022 the government 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 duration of the fuel subsidy, Romania was able to reduce pressure on the fiscal budget.

Alternatively, countries can target fuel subsidies to certain users using methods such as targeted cash transfers or in-kind payments. Some governments subsidize specific fuels that are predominantly used by certain sectors. However, there are logistic costs and challenges associated with instituting sector-targeted subsidies, as fuels are used by many sectors and a noticeable price difference can encourage the illegal diversion of subsidized fuels. In 2022, out of the 154 economies analyzed, 31 provided fuel subsidies targeted to specific users. Certain countries limit subsidies to specific sectors, such as power plants that use HFO or diesel, farmers, and public transport providers. These can be temporary or one-off; they can also last a pre-set time period (for example, the Bahamas's 2022 subsidy to the power utility to partially cover fuel purchase costs) or be recurring (for example, Germany's agricultural diesel subsidy). Recurring subsidies can be difficult to phase out because consumers who benefit from them become accustomed to the financial relief and 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.

In 2022, several countries provided subsidies to transport operators to dampen the impact of oil price increases on public transportation fares. Countries that had existing subsidy programs for transport operators (for example, the Philippines) were able to scale up these programs easily. However, a few countries that attempted to introduce such programs for the first time in 2022 (for example, Ethiopia and Jamaica) faced several challenges. These included developing processes to identify eligible transport operators and distributing the subsidy to them in an efficient manner. Overall, the country experiences in 2022 highlight the complexities of creating targeted subsidies for transport operators, and the logistic challenges of operationalizing these subsidies should not be underestimated.

Targeting fuel subsidies only to the segments of the population that truly need them would be ideal. However, this is a difficult task as it requires significant information and logistic processes to effectively identify and distribute the subsidy to those meeting the requirements. Countries with good social registers and established social protection programs can deploy income-targeted fuel subsidies. For example, the United Arab Emirates has a social assistance program to support allowances as a response to inflation. The program includes three components: food support, electricity and water subsidy bonus, and fuel subsidy bonus. 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 receive 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, the applicant must be among the low-income category.

Since 2022, some countries have lacked the fiscal space to finance fuel subsidies and have been forced to borrow from international lenders. For example, in June 2022, Honduras secured a US$208 million loan from the Central American Bank for Economic Integration to support the financing of fuel and electricity subsidies. Of this amount, US$183.86 million was allocated to reducing the tax on super and regular gasoline and diesel, while US$6.69 million was allocated to subsidizing 50 percent of the increase in the price of diesel.

Some countries, especially in Latin America, have fuel price stabilization funds that are used to smooth prices during times of international price volatility. In principle, these funds can be self-financing by accumulating funds when global oil prices are low and subsidizing prices through the fund when prices rise above a 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 ineffective overall and led to ballooning deficits in the funds, forcing governments to make large fiscal transfers to maintain liquidity in the funds. The premise of price stabilization funds no longer aligns with the realities of the international oil market. These schemes rely on the assumption that oil prices regularly revert to a mean price after short periods of deviations. However, since 2004, this has rarely occurred. Instead, the world has experienced long periods of steady price increases, punctuated by occasional price collapses.

03

SECTION 3:

REFORMING FUEL SUBSIDIES & PRICE CONTROL MEASURES

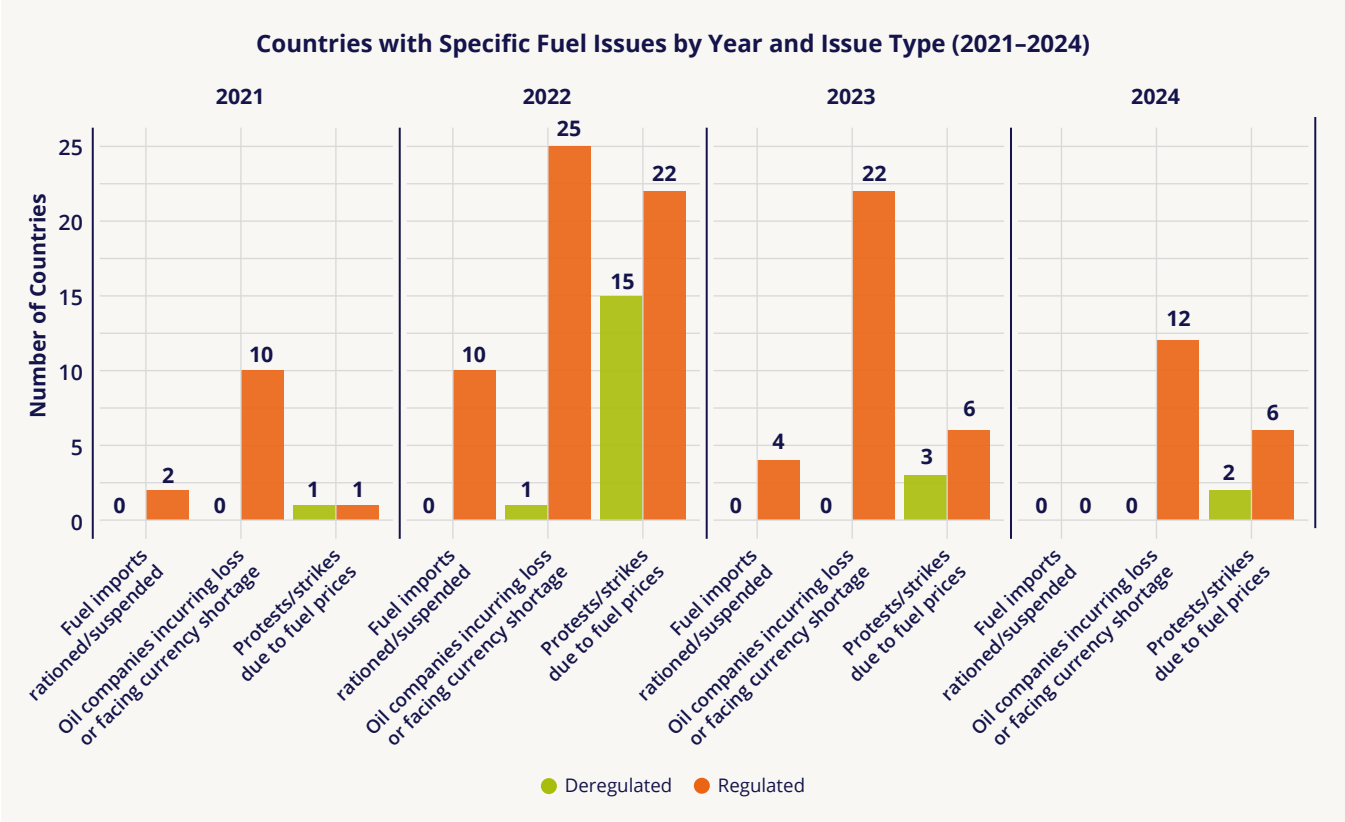
Prior to 2022, several countries had announced plans to reform fuel subsidies. However, the surge in international oil prices compelled many governments to intervene in the domestic oil market through a range of measures to shield consumers from rising costs. While these measures provided temporary relief from price shocks, they significantly strained public finances. Many governments were forced to cut spending in other essential sectors, borrow funds, or accumulate debt.

This section examines global trends surrounding fuel subsidy reforms since 2021 and offers recommendations for policymakers navigating the complex landscape of fuel pricing and subsidy mechanisms.

Rising fuel market disruptions in recent years exposed the negative impact of fuel subsidies, driving reform efforts

Public pressure to intervene in fuel markets surged in 2022, with protests and strikes in at least 37 countries demanding government interventions to lower prices. In at least 26 countries, domestic oil companies incurred financial losses as domestic prices failed to cover costs, further exacerbated by difficulties in accessing foreign exchange. In at least 10 countries, fuel imports were temporarily suspended in 2022 due to payment arrears to importers as well as difficulties in accessing foreign exchange to pay for imports. These disruptions revealed the negative consequences of rising subsidies.

Figure 15: Domestic Oil Market Problems (2021–24)



Source: ***Global Fuel Subsidies and Price Control Measures Database*** (World Bank 2025b)

Note: The figure captures in each year the number of economies where reports were found on the occurrence of fuel import rationing, oil companies facing issues regarding financial losses or currency shortage, and instances of protests/strikes related to fuel prices. The data was gathered only from available local and international online news sources. It is important to note that there are data constraints as some countries' news outlets may not cover these topics, and there are very limited online news sources available for some countries.

By January 2023, 13 economies had removed the temporary subsidy on fuels they implemented in 2022. An additional 33 economies removed these temporary measures by January 2025 (Table 2). As of January 2025, at least 16 economies are implementing subsidy reforms, while 9 others are 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 from recent international experience documented in this report, the accompanying background paper "Global Stock-take of Fuel Subsidies and Pricing Policies," and the two new World Bank global databases developed for this study.

Table 2: Economies Reforming Fuel Subsidies 2021–24

Type of Subsidy Reform	Economies In Each Category			
	2021	***2022***	***2023***	***2024***
No subsidy	66	22	44	59
Removed temporary measure	0	13	25	8
Considering subsidy reform	3	6	4	9
Reforming subsidy	3	10	24	16
No reform of subsidy	82	103	57	62
Total	154	154	154	154

Economies worldwide adopted various strategies in the past few years to reform fuel subsidies, with mixed outcomes

Examining past experiences in fuel subsidy reforms highlights important lessons. Some economies have implemented clear and targeted reforms that helped mitigate fiscal burdens, while others have faced significant challenges due to rising costs, market disruptions, and implementation issues.

The experience of countries that successfully phased out temporary price controls and subsidies in 2022 offers valuable lessons. In all, 13 countries that introduced temporary fuel price controls and subsidies in 2022 removed these measures by the end of the year. Their experience indicates that if a temporary subsidy or price control is introduced, it is crucial to clearly define upfront: (i) the conditions or timeline for terminating the subsidy, including criteria for potential extensions (for example, import price rises 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, or oil export revenue, if available).

Cabo Verde is one of the 10 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 it 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 had fully passed on the rise in imported fuel prices, the price of gasoline would have increased by 13 percent and diesel by 26 percent.

In July 2022, the government resumed 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 duty on gasoline from 20 percent to 10 percent. Taxes on diesel and gasoline were also reduced. These reductions remained 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 and could provide only temporary measures to alleviate the pressure of international oil price increases. Policymakers were upfront about the country's fiscal limitations in providing fuel subsidies. The regulatory agency publicly stated that the measures would be temporary, helping to manage public expectations. The prices were subsidized for only three months with priority given to LPG (used mainly by households) and fuel oil for power plants (to mitigate impact on electricity prices). The measures were in force during the most disruptive months in the oil markets, partially shielding consumers from the international price increases. When international oil 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 controls 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. 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 increased 10-fold, up from about US$0.4 billion in 2019 to US$3.1 billion in 2023.

With the ballooning cost of subsidies, in 2023 the Malaysian government 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. For now, the government is maintaining diesel subsidies for certain users, including 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 who own diesel vehicles, as well as small-scale farmers, to mitigate the potential impact of rising prices on their incomes.

While there is no one-size-fits-all approach to reforming subsidies, there are some overarching recommendations based on past experience

Experience from previous decades indicates that fuel subsidy reform is a continuous process replete with challenges. Many countries that attempt to reform fuel subsidies experience setbacks and even reform reversals. Each country has a unique starting point as the subsidy and fuel market policies vary between countries. No single approach fits all. 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 lessons for countries that are currently considering or are actively instituting such reforms. Some key considerations are included below. These recommendations are not stand-alone solutions; many are complementary and can be combined or implemented simultaneously to enhance the effectiveness of reform efforts.

Implementing social protection measures and targeted cash transfers: Targeted cash transfers are a crucial policy tool for offsetting the impact of fuel price increases on 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 6). 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.[19]

19 More information on these recommendations can be found in Bacon and Gencer (2024). ***Approaches and Insights from Recent Research on Energy Subsidy Reform*** and Hoy, Christoper, Yeon Soo Kim, Minh Nguyen, Mariano Sosa, and Sailesh Tiwari (2023). ***Building Public Support for Reducing Fossil Fuel Subsidies: Evidence across 12 Middle-Income Countries.***

Box 6: 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 US 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 subsides 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 World Bank support, 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 2024a).

Using fiscal savings strategically: How 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 energy efficiency and renewable energy helps mitigate the economic impacts of the reform and maintain public support (Box 7). 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 advancements in 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. [20]

Box 7: Using Fiscal Savings from Reforms for Social Programs and Encouraging Fuel Switching – Experience of Ecuador

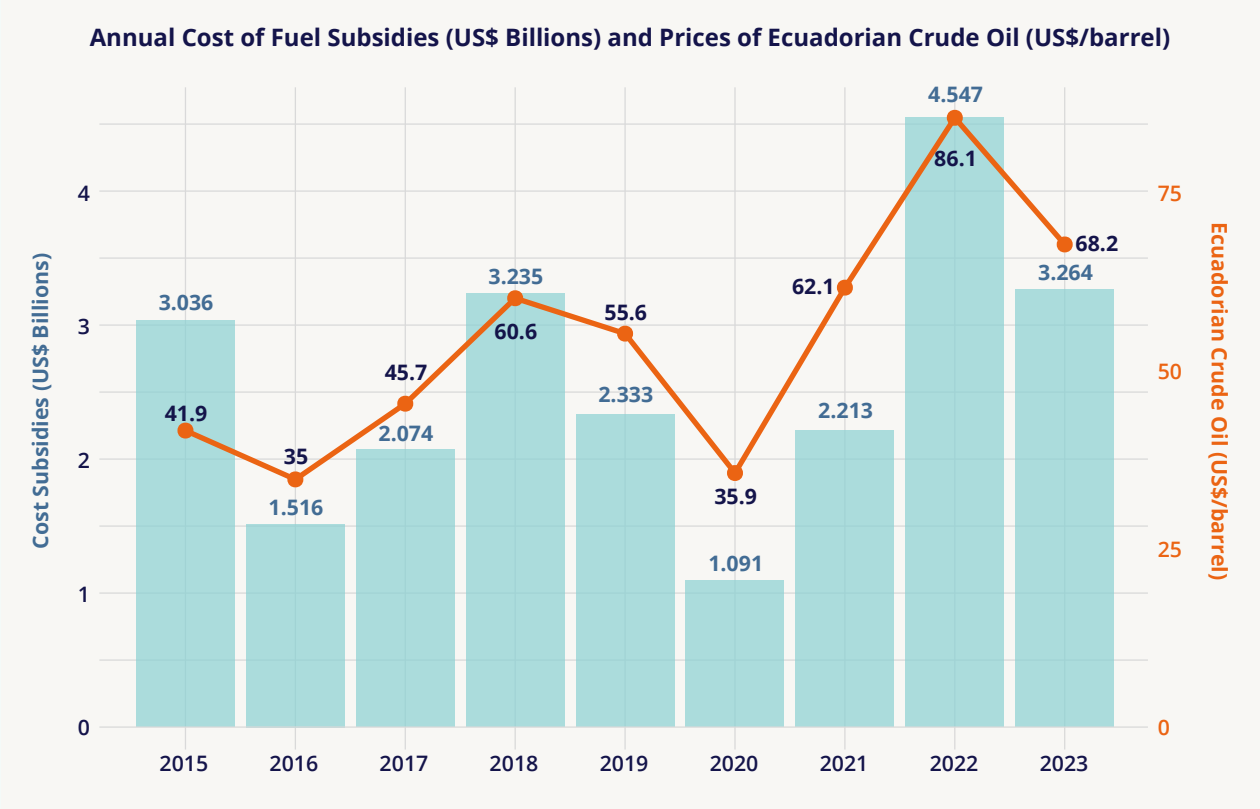
Ecuador has a history of subsidizing fuel prices with some failed attempts at reforming these subsidies. In October 2019, the government abruptly announced the elimination of subsidies on gasoline and diesel that had been in place for nearly 40 years. Following the announcement, prices for gasoline and diesel rose overnight by 25–75 percent. 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. Ultimately, 12 days after announcing the removal of subsidies, the government reinstituted them.

Fuel subsidies have become a significant fiscal burden for the country in recent years (Figure 16). They are three times higher than the government's spending on social protection programs, such as the Human Development Bonus and 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).

20 More information on these recommendations can be found in Gentilini, Ugo, Mohamed Bubaker Alsafi Almenfi, Hrishikesh Tirumala Madabushi Matam I, Yuko Okamura, Emilio Raul Urteaga, Giorgia Valleriani, Jimmy Vulembera Muhindo, and Sheraz Aziz (2022). Tracking Global Social Protection Responses to Price Shocks; and Njinkeu, Dominique, Calvin Zebaze Djiofack, Defne Gencer, Lulit Mitik Beyene, and Mosuru Olukayode Alli (2024). Macroeconomic Modeling in the Context of Energy Subsidy Reform.

Figure 16: Annual Cost of Fuel Subsidies in Ecuador (2015-2023)



Source: Erazo 2024. Precios y Subsidios a los Combustibles en Ecuador.

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 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 greenhouse gas 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 line 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).

Maximizing the socioeconomic benefits of subsidy reforms through energy efficiency investments: Leveraging fiscal savings from fuel subsidy reforms to fund energy efficiency programs and aligning fuel subsidy reforms with wider energy efficiency strategies can strengthen the sustainability of the reforms. Investments in efficient appliances, public lighting systems, and energy audits not only reduce energy consumption but also alleviate the financial burden on vulnerable populations. By implementing targeted efficiency measures, governments can mitigate the socioeconomic impacts of subsidy removal, increase public support, and advance long-term development goals (Box 8). Redirecting subsidy savings to scalable energy efficiency projects reduces household energy costs, enhances energy security, and lowers greenhouse gas emissions.[21]

Box 8: Phasing Out Fossil Fuel Subsidies and Advancing Energy Efficiency for Broader Socioeconomic Benefits – The UJALA Experience in India

Launched in 2015, India's UJALA (Unnat Jyoti by Affordable LEDs for All) program aimed to make energy-efficient LED bulbs affordable and accessible to domestic consumers. The initiative was designed to reduce energy consumption, lower household electricity bills, and promote environmental sustainability by replacing inefficient incandescent bulbs with modern LED technology (Abagi 2023).

By 2022, UJALA had distributed over 367 million LED bulbs, resulting in annual electricity savings of 47.78 billion kWh and a reduction of 38.7 million tons of CO_2 emissions (Indian Ministry of Power 2022). The program also significantly improved affordability, with the cost of LED bulbs dropping by close to 80 percent from 2014 to 2022, making energy efficiency accessible to millions of households across the country (Indian Ministry of Power 2022).

An innovative financing model drove UJALA's success, leveraging bulk procurement to bring down costs and recover expenses through bulb sales. This approach made UJALA a self-sustaining program while significantly reducing household energy expenses.

Simultaneously, India implemented major fuel subsidy reforms, such as the Direct Benefit Transfer for LPG (DBTL) in 2013 and diesel price deregulation in 2014, which saved billions annually (Mittal et al. 2017). These reforms reduced fiscal pressures and fostered a regulatory environment that enabled large-scale energy efficiency programs like UJALA to thrive. While there was no direct funding link between fuel subsidy savings and UJALA, the alignment of these policies illustrates how phasing out fossil fuel subsidies and promoting energy efficiency can collectively deliver fiscal, social, and environmental benefits.

21 More information on how this recommendation can be implemented can be found in Mattalah, Siham (2024). ***Fossil Fuel Subsidy Swaps: A Path Towards Accelerating the Renewable Energy Transition in Saudi Arabia*** and Klaiber, Christoph Michael, Jun Erik Maruyama Rentschler, and Ira Irina Dorband (2023). ***Distributional and Health Co-Benefits of Fossil Fuel Subsidy Reforms — Evidence from 35 Countries***.

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 for 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.[22]

Regularly updating and implementing the fuel pricing formula: 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 (Box 9). 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.[23]

22 More information on this recommendation can be found in Bacon and Gencer (2024). ***Approaches and Insights from Recent Research on Energy Subsidy Reform***. A country example where this was implemented can be found in Jaramillo et al. (2023). Mozambique: Fuel Subsidy and Pricing Reform.

23 More information on this recommendation can be found at:
The Time Is Right! Reforming Fuel Product Pricing Under Low Oil Price, IMF (2020); and Automatic Fuel Pricing Mechanisms with Price Smoothing: Design, Implementation, and Fiscal Implications, Coady et. al (2012).

Box 9: Updating the Fuel Price Formula – Experience of Sierra Leone

Sierra Leone is fully reliant on imports of refined petroleum products in the absence of refining capacity. Sierra Leone's fuel pricing formula had not been reviewed and materially updated in the past 30 years. The decoupling of the fuel pricing formula from import costs led to demand far exceeding supply, fuel shortages, and black marketing. Sierra Leone also had a unique policy of having the same end-user price for gasoline, diesel, kerosene, and heavy fuel oil for the past several years. As a result, end-user fuel prices did not reflect the differences in supply costs of different fuels. In order to maintain this policy, components in the formula, including taxes and duties, were adjusted on an ad hoc basis to equalize end-user prices, resulting in losses of government revenue and fuel price subsidies.

In July 2024, the government updated and operationalized the fuel pricing formula. The main revisions entailed:

1. Allowing price variation between fuel types in the fuel pricing formula.
2. Switching, for gasoline, diesel, and kerosene, from using Platts Mediterranean quotations to Platts West Africa to more accurately reflect the country's import realities.
3. Introducing a price correction levy into the formula to correct for discrepancies arising between the ex ante "theoretical" regulated price and the actual costs of fuel supply. This levy is primarily used to adjust for import costs and exchange rates as these are two key elements in the formula where the movements are unknown ex ante.
4. Dissecting the "other charges" component in the formula and removing certain elements, such as war risk, which led to substantial reduction in the components cost per metric ton.

The revised formula more accurately accounts for cost dynamics of supplying fuels in the domestic market, especially import costs. Fuel prices are now differentiated between fuel types to reflect the heterogeneity of costs between the fuels more accurately. The Petroleum Regulatory Authority now regularly revises fuel prices based on the formula and transparently publishes the breakdown of the price for each fuel on its website on a monthly basis (***https://pra.gov.sl/pricing-formula***).

The authorities benefited from undertaking these reforms during a period of moderation of international oil prices in 2024. The price of each fuel declined under the revised formula, thus avoiding potential public backlash. In addition, the authorities extensively engaged with all stakeholders to discuss the potential revisions to the formula and revised based on feedback from consumer groups, oil companies, and the relevant ministries.

Utilizing distribution analysis and modeling different scenarios for reforms: 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 10). Developing multiple reform scenarios allows governments to assess the fiscal, social, and political implications of various strategies. By modeling different approaches, policymakers 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.[24]

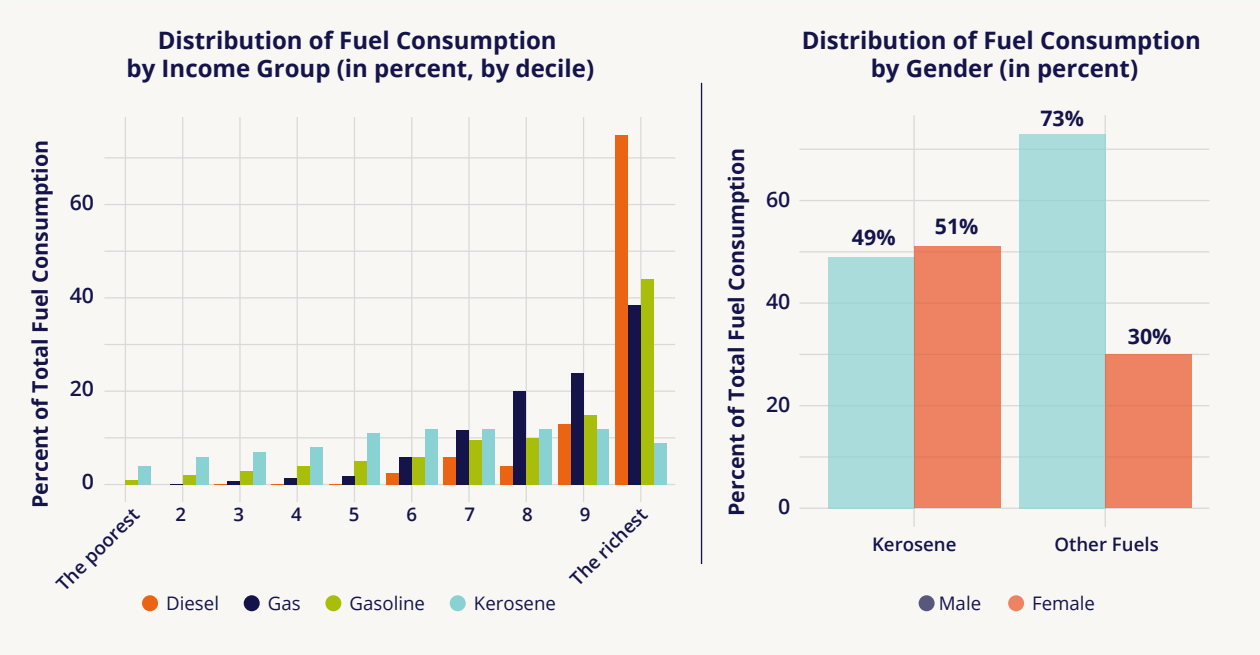
Box 10: Distributional Analysis to Inform Fuel Subsidy Reforms – Experience of Cameroon

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. In 2022, 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 2023b).

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 17). 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.

24 More information on this recommendation can be found in Klaiber, Christoph Michael, Jun Erik Maruyama Rentschler, and Ira Irina Dorband (2023). ***Distributional and Health Co-Benefits of Fossil Fuel Subsidy Reforms — Evidence from 35 Countries*** and Njinkeu, Dominique, Calvin Zebaze Djiofack, Defne Gencer, Lulit Mitik Beyene, and Mosuru Olukayode Alli (2024). ***Macroeconomic Modeling in the Context of Energy Subsidy Reform***.

Figure 17: Distributional Analysis of Fuel Subsidies in Cameroon



Source: Cameroonian authorities and World Bank staff calculations (World Bank 2023b).
Note: The distribution of fuel consumption by deciles is estimated from data from the 2021–22 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 (Owoundi and Coulibaly 2023).

Building 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[25]

25 More information on this recommendation can be found in Gencer, Defne and Beatriz Arizu (2024). ***From Ambition to Action: Practical Insights on Energy Subsidy Reforms*** and World Bank (2024). ***Building Public Support for Energy Subsidy Reforms: What Will it Take?***

Strengthening institutional coordination: 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.[26]

Practical frameworks and guidelines for sustainable subsidy reforms: Governments seeking to reform energy subsidies can draw on various international frameworks and toolkits tailored to address the challenges of these processes. Examples include the following:

- The ***Energy Subsidy Reform Assessment Framework*** (ESRAF), developed by the World Bank's Energy Sector Management Assistance Program, is a comprehensive analytical toolkit. ESRAF assists governments in navigating the political and social challenges of energy subsidy reforms by offering practical guidance on key aspects of the process. These include identifying and estimating subsidies, evaluating their fiscal and social impacts, and developing strategies for effective stakeholder engagement. The framework consists of 10 good practice notes that collectively equip policymakers with insights to achieve reforms that are both technically sound and politically feasible.
- The ***Energy Subsidy Reform Facility*** (ESRF), also a World Bank initiative, complements ESRAF by generating actionable knowledge to support sustainable subsidy reforms. The ESRF emphasizes protecting vulnerable populations during the transition by providing technical assistance grants, producing ***analytical reports***, and fostering knowledge exchange among practitioners (Energy Sector Management Assistance Program (ESMAP) 2024)). This facility has supported over 70 countries, producing evidence-based outputs that inform World Bank operations and guide governments on energy subsidy policies and regulatory reforms.
- The United Nations Development Program (UNDP) offers resources that focus on fossil fuel subsidy reforms. UNDP's report ***Fossil Fuel Subsidy Reform: Lessons and Opportunities*** provides comprehensive guidance for policymakers on structuring reforms that align with socioeconomic and environmental goals. The report emphasizes balancing subsidy reductions with measures to protect low-income populations, ensuring that reforms are equitable and contribute to reducing greenhouse gas emissions.

26 More information on this recommendation can be found in Gencer, Defne and Beatriz Arizu (2024). ***From Ambition to Action: Practical Insights on Energy Subsidy Reforms*** and Droste, Nils, Benjamin Chatterton, and Jakob Skovgaard (2024). ***A political economy theory of fossil fuel subsidy reforms in OECD countries***.

- The IEA provides the ***Energy Efficiency Policy Toolkit***, which, while primarily aimed at enhancing energy efficiency, offers relevant strategies for subsidy reform. The toolkit outlines approaches for implementing policies that reduce energy consumption, indirectly addressing the economic and environmental impacts of subsidies. By focusing on incentives, regulations, and information dissemination, the IEA's guidance supports policymakers in fostering energy efficiency and aligning subsidy reforms with broader energy and climate goals.

These frameworks and toolkits collectively offer governments a robust foundation to design and implement effective energy subsidy reforms. They ensure reforms are socially sensitive, fiscally responsible, and environmentally sustainable, enabling countries to navigate the challenges of transitioning to more equitable and efficient energy systems. The World Bank's new ***Global Fuel Prices Database*** and the ***Global Fuel Subsidies and Price Control Measures Database*** will be additional resources for countries.

Sustainable fuel subsidy reforms hinge on gaining public support, especially through a communication program that details the government's motivation for instituting these reforms. Credible targets for how the savings will be utilized for the public good while protecting vulnerable consumers are essential for maintaining trust. Currently, 25 out of the 154 economies analyzed in this report are either in the process of implementing fuel subsidy reforms or are considering instituting them. These countries can benefit from global best practices highlighted in this report to guide their subsidy reform efforts. They can also leverage insights from the two new World Bank global databases, which will be updated and maintained on an ongoing basis.

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