



Research Article

# Drivers and Barriers of Fossil Fuel Subsidy Reforms in Developing Countries: A Review

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## Abstract

While all the countries around the world agree to the urgency of eliminating fossil fuel subsidy reforms due to the rising awareness of their environmental, economic, and social effects, the magnitude of fossil fuel subsidies remains substantially high. Efforts of reforms of fossil fuel subsidies were aborted in many developing countries. It is, therefore, of particular importance to identify and examine the motivators and obstacles of fossil fuel energy reforms in those countries. This study conducted research limited to peer-review papers published between 2000 and 2020. Rather than offering a comprehensive summary of all the factors that motivate or hinder subsidy reforms in an exhaustive way, we structured evidence collected into five categories of factors: economic, social, environmental, political, and institutional. Our research focuses on developing countries as the largest part of fossil fuel subsidies is embedded in non-democratic countries with weak institutional and political systems. Key drivers included fiscal strain on the governments; economic cost of fossil fuel subsidies, the role of international oil prices, environmental cost, international commitments, donor pressure, and social inequity. Key barriers included lack of communication to the public, lack of credibility and confidence in governments, weak macroeconomic conditions, welfare implications on the poor and households, the burden from powerful interest groups, and institutional capacity of governments. Our findings show that ensuring successful implementation and durability of fossil fuel reforms will require a full understanding of a country's economic, social, political, and institutional conditions and constraints.

**Keywords:** Subsidies, fossil fuels, energy, government support.

## Introduction

### *Global burden of Fossil Fuel subsidies*

Fossil fuels include petroleum, natural gas, and coal and frame 80% of global primary energy consumed in the world since around

1910 when coal consumption exceeded that of biofuels. Most governments in the world provide support for both production and consumption of these fuels despite their well-established economic, social, and environmental damages. The magnitude of the world fossil fuel subsidies estimated by

the International Energy Agency (IEA) is ranging around \$800 billion, of which two-thirds transpire in the developed countries of the Organization of Economic Cooperation and Development (OECD). In developing countries, consumer subsidies proliferate constantly and total nearly one trillion per annum.

On the grounds of the ongoing renewable energy transition, these long-established subsidies hover at the top of the international policy agenda as one of the most debated and commonly used policy tools. Since 2009, multiple multilateral and bilateral commitments have been made to rationalize and eliminate these subsidies such as the G20 commitment. The literature has reported that fossil fuel subsidies are socially unjust, they distort economic performance as they incite smuggling and discourage investment while damaging the climate and environment. Removing or reducing subsidies on fossil fuels constitutes both an urgency and a challenge to most countries in the world, especially developing countries. Yet, experiences of reforms in developing countries are mixed, with a considerable record of failures or partial successes due to the severe economic, social and political externalities of these reforms. This illustrates the complexity of the factors that hinders fossil fuel subsidy reforms and shows the necessity of conducting further research in this area.

### **Methodology**

For the purpose of this research, a comprehensive literature review was conducted in several scientific databases including Proquest, Web of science, Emerald database, Scopus, and Springer to identify relevant studies. The research was limited to peer-review papers written in English and French published between 2000 and 2020. All research gathered focused on both the factors that trigger and hinder fossil fuel subsidy reforms in the context of developing countries.

The search for suitable keywords was carried out in Google Scholar and grouped into main topics: fossil fuel subsidies,

reform, drivers, and barriers. The search strategy was designed with a Boolean full-text search term. Different terms of keywords were used: subsidy reform\*, subsidy phase-out\*, driver, framework, decision\*, policy\*, barrier, challenge. To refine our search, additional keywords were combined with the above terms including fossil fuels, petroleum products, implementation, and design.

Once the retrieved information is collected, we then conducted the screening process in three stages. Starting with a review of the title and abstract of each contribution, several duplicates could be excluded for further review. Only contributions were addressed dealing with fossil fuel subsidy reforms' drivers and obstacles. Articles that were not considered such as original research, letters to editor, comments, or reviews were also excluded. Studies that focus on regulation, liberalization, and institutional restructuring were also excluded. We have drawn on reviews and notes published by multilateral financial institutions and international development agencies that provide evidence about the current state and progress of fossil fuel subsidy reforms in order to present a more general picture of these reforms in developing countries. Although our review was most interested in the reform adoption and implementation, we reviewed the literature related to any aspect of the energy subsidy reforms.

### **Results**

#### ***The drivers of fossil fuel subsidy reforms***

##### **✓ Fiscal strain on the governments:**

The fiscal pressures affiliated with fossil fuel subsidies are a fundamental driver for reforms in many of the middle and low-income countries. According to Coady et al. (2015b), consumer and producer subsidies were estimated at 0.7 percent of global gross domestic product (GDP) in 2013. The main reason behind this high rate is the surge of consumption tied to the low domestic energy-pricing policies.

Middle and low-income economies are characterized by their high reliance on petroleum products. The world market prices of these products are highly volatile and have an instant effect on producers' costs and the cost of living (Abouleinein et al. 2009, Anand et al. 2013, Asmelash et al. 2017). The rise of the cost of living and domestic demand will translate into price hikes of main consumer goods (Coady et al. 2012, Davis, L. 2013).

The oil and gas suppliers in these countries are exposed to the volatile international commodity price cycles as well as to the effects of exchange rate fluctuations on the size of petroleum products subsidies (Coady et al. 2012, Kojima and Koplow, 2015). This results in the increased macroeconomic vulnerability of these countries in addition the aggravation of their fiscal deficit and deterioration of their balance of payments (Widodo et al. 2012, Welhem et al. 2015, Whitley et al. 2015).

✓ **Economic cost of fossil fuel subsidies:**

Generally, the debate over subsidies' inefficiency fuels discussion of energy subsidies impacts. These "unintended" effects have become strong drivers of subsidy reforms. The IEA, OECD, World Bank, IMF and Fattouh & El-Kattiri (2012) undertook preliminary work on impacts analysis of energy subsidies in the Middle East and North African region (MENA). Plante (2014) expanded his scope of analysis to all oil-importing and exporting countries. These studies support previous research about the socio-economic inefficiency of energy subsidies, which link price signals and misallocation of resources. The authors argue that arbitrary differences in prices generate distortions in demand among different types of energy products and encourage fuel adulteration.

Clements, et al. (2013a) also outlined some main economic impacts of fossil fuel subsidies, which include weakening the competitiveness as subsidies encourage capital-intensive industries and depress investment in the energy sector, increase incentives for smuggling fuels especially in

developing countries. Furthermore, as energy subsidies support most input fuels for many sectors in the economy, they have a direct impact on the productivity of different industries and inflation rate in the short-term (Coady et al. 2006a, Bastagli et al. 2015, Welhem et al. 2015). This results in adverse effects on wages and prices of other output products.

By drawing on the concept of energy subsidies as pro-cyclical destabilizers, (Sdravovich et al., 2014, Clements, et al. 2013a) have been able to show that public spending on energy subsidies is linked to growth. Government spending usually increases with the rise in demand and economic activity and dwindles as economic activity declines. Several studies thus far have highlighted the negative implications of procyclical spending in developing countries (Lane, 2003; Abdih et al., 2010; Kaminsky et al. 2004; Erbil, 2011).

✓ **The role of international fossil fuel prices:**

The fall of international oil prices is seen by many countries as an opportunity of reforming their fossil fuel subsidy schemes (Ghana and Indonesia). In order to make domestic prices affordable for consumers, most governments adjust domestic fuel prices by compensating the gap between international oil prices and the final prices in domestic markets. This adjustment is often intensified by currency depreciation combined with the hike of global oil prices, especially for oil-importing countries. Therefore, the hike in international prices can be a strong driver for reforms and even make them unavoidable (Rentschler, J. and Bazilian, M. 2017b).

As noted by many authors, the decline of oil prices is not a key factor for success of fossil fuel subsidy reforms. Reforms ought to be implemented in a period of economic growth and improved standards of living. Clements, et al. (2013a) provided a detailed assessment of the fossil fuel reforms that were implemented based on the brief drop in international oil prices. The authors reported that although some of these reforms were successful, the subsidies

reemerged once the international oil price peaked. In addition, the study reported that out of 28 reforms implemented, 11 reforms were sorted as partially successful since subsidies later reappeared. This emphasizes that international oil prices are a conducive condition to these reforms but not a sufficient one.

A broader perspective was adopted by Benes, Cheon, Urpelainen and Yang (2015), who argue that the rise of international oil prices fosters political tensions that result in a reluctance of reforming fossil fuel subsidies. The increase in domestic prices is likely to face strong opposition from households and political groups' interests.

#### ✓ **Environmental cost of fossil fuel subsidies**

Since 2008, many international institutions (IMF, OCDE, IEA, IISD and WTO) have raised questions about the environmental implications of energy subsidies. The relative importance of environmental effects of fossil fuel subsidies has been subject to considerable debate. They encourage excessive energy consumption and therefore hasten the decline of natural resources. Numerous studies have attempted to explain how fossil fuel subsidies in different countries have an impact on environmental quality (Koplow and Dernbach JN, 2001; Pieters, 2002; Porter, 2002; Guiyang, 2007; Morgan, 2007; Shafier-Pour and Farsiabi, 2007; Ellis, 2010; Jones, 2011; Holton, 2012; Hong et al. 2013; Whitley, 2013). The authors demonstrated that since fossil fuels are harmful to the environment, their subsidies increase greenhouse emissions (SHS) as they incentivize production and consumption of energy by making prices more affordable to consumers and producers (Koplow and Dernbach, 2001). Fossil fuel subsidies also hinder investment in renewable technologies and modern energy infrastructure and the development of an efficient low-carbon economy (Porter, 2002; Pearce, 2003; and Morgan, 2007). As a consequence, energy subsidies hamper efforts that aim to address the urgent issues of global warming and climate change.

Overall, these studies heightened the need for a more accurate environmental assessment to assert the level of emissions. There is a consensus among environmental scholars about the necessity of redirecting subsidy reform's savings to effective mitigation of climate change causes (Jakob and Hilaire, 2015; Schmidt and Matsuo, 2017).

#### ✓ **International commitments and donor pressure**

Several authors have shed light on the role of international institutions in promoting fossil fuel subsidies from a political perspective (Besada and Olender, 2015; Inchauste and Victor, 2017). International efforts to address fossil fuel subsidies range from intergovernmental organizations (IMF, IEA, GSI, CFR, OECD, and World Bank) and to regional multilateral forums (G20, Friends of Fossil fuel subsidy Forum and APEC).

In this regard, studies have heightened the intertwined connection between the differences in definitions and quantification of FFS given by international institutions, in particular the International Monetary Fund (IMF) and the Organization of Economic Cooperation and Development (OCED). Skovgaard (2017) analysed the definitions provided by the IMF and OCED and highlighted how competing they are. Another shred of scholars focused on the influence these institutions have on the implementation and process of reforms by investigating voluntary commitments under the Asia-Pacific Economic Cooperation (APEC) and the G20. Similarly, analysis of these commitments was carried out by Smith and Urpelainen, (2017), who pointed out that countries are forced to stick to FFS reforms due to their fear of reputational costs. In the same vein, Rentschler and Bazilian (2017a) noted that the reviews produced by international commitments such as the G20, about the cross-country experiences of subsidy reforms and the lessons learned from them, help countries avoid negative effects of reforms and therefore contribute to their success. The literature is almost sparse about how some international institutions

have remained silent regarding FFS reforms compared to other subsidies such as renewable subsidies, especially the World Trade Organization (WTO).

#### ✓ **Social inequity**

The fossil fuel subsidies are justified by governments as a measure of protecting the population from international oil price volatility. However, they affect negatively the income level of vulnerable and poor households along with their welfare (Rentschler, 2016). Previous research has indicated that fossil fuel subsidies benefit mostly to high-income groups of the population; this depicts the highly regressive nature of these subsidies (Coady and Newhouse, 2006b; Coudouel, Dani, and Paternostro, 2006; El-katiri and Fattouh, 2017; Lustig, 2016; Nwafor, et al. 2006; Vagliasindi, 2013). Coady et al. (2015b) have reported that the poorest 20% of households receive six times fewer subsidies than the wealthiest 20%. Clements et al. (2013a), in their cross-country analysis, showed that energy subsidies benefit households through two channels: first through low prices for energy used in heating, cooking, and personal transport, and secondly, through low prices for other products and services which use energy as an input.

A significant body of literature has investigated the effects of petroleum subsidies on the economy with a focus on social implications (Clements et al. 2013a, Coady et al., 2006; Davis, 2013; Ellis, 2010; Saboohi, 2001; Siddig et al. 2014; Umar and Umar, (2013); Widodo et al., 2012 and so on). Thus, although it seems at first glance that fossil fuel subsidies enable consumers to purchase essential energy, these policies are, in fact, the funds that are not spent on education systems, infrastructure, public transport and health care. As a result, fossil fuel subsidies usually aggravate patterns of poverty and inequality (Renner, et al. 2015).

#### **Barriers to fossil fuel subsidy reforms**

##### ✓ **Lack of information & adequate communication to the public**

Availability of information regarding subsidization often hinders fossil fuel subsidy reforms. The quantification of fossil fuel subsidies, including consumer and producer subsidies, is often implicit and is rarely explicitly expressed in the budget. This estimation of subsidies is a key factor in reflecting the magnitude of the socio-economic and distributional impacts of Fossil Fuel subsidies (Rentschler and Bazilian, 2017b). Citizens are unaware of the diverse effects of these subsidies such as the level of domestic prices compared to international prices, the implications of the increase of oil prices on the budget, on the economic growth, on poverty reduction, and the gains of distribution of energy subsidies. Moreover, the lack of understanding of the link between fossil fuel subsidies, their shortcomings on high-priority public investments, results in strong public opposition and even a risk of widespread public protests, particularly in oil-importing countries where the magnitude of fossil fuel schemes is massive.

Clements, et al. (2013a) carried out a detailed examination of 28 reform case studies of fossil fuels. The analysis established that 17 out of these reforms reported that lack of effective communication and public information was an impediment to reform implementation, as it triggered strong opposition from households in the form of public protests. The successful reforms were based on an assessment of the scale of fossil fuel subsidies and comprehensive communications program before enacting reforms.

##### ✓ **Lack of credibility and confidence in governments**

In most developing countries, fossil fuel subsidies are difficult to reform mainly due to the absence of public support related to the lack of credibility and confidence in the ability of governments to mitigate the negative outcomes of domestic fossil fuel price reforms, especially the poor and vulnerable groups (Alleyne et al. 2013; Clements, et al. 2013a; Victor, 2009). In these settings, citizens and groups of interests might desist the elimination of

subsidies, as they perceive them as a right from the state (Strand, 2013). This is especially the case of countries with corrupted systems of public spending, poor governance of public policy, and lack of transparency. El-Katiri and Fattouh (2017) and Clements, et al. (2013a) support this view and argue that most oil-exporting countries face challenges in implementing cash transfer programs despite their substantial financial resources due to their lack of administrative capacity public goods in place of subsidies. Victor (2009) shows that governments struggle to implement Fossil fuel subsidy reforms because they lack the institutional ability and efficient means to deploy alternative policies. In short, lack of confidence in governments was reported by literature as a crucial element behind the failure of reforms in many countries, for instance, the case of Indonesia in 2003 and in Nigeria in 2011.

✓ **Weak macroeconomic conditions**

Fossil fuel subsidy reforms are often considered as a part of policies that stifle inflation and promote growth in the long term. Public opposition is likely to abate in a span of strong growth and relatively low inflation. Accordingly, phasing out fossil fuel subsidies can have adverse effects in the short-term if implemented under weak macroeconomic conjuncture. Public concerns can be entrenched about the efficiency of monetary and fiscal policies if their ability to mitigate the adverse effects is deficient (Whitley and van der Burg, 2015).

A full understanding of the macroeconomic context of reforms is decisive to their success (Kojima and Koplou, 2015, Koplou, 2010, Laan and Beaton, 2010). Experiences of MENA (the Middle East and North Africa) countries that have implemented fossil fuel subsidy reforms in a period of staggering fiscal instability stemming from rapidly growing domestic demand on FF subsidies, low rate of investment and employment, slow economic growth, have raised questions about packaging, timing, and sequencing of reforms (Rentschler and Bazilian 2017b; Shafie-Pour Motlagh and

Farsiabi, 2007; Strand, 2013; Vagliasindi, 2013).

Governments cannot always delay fossil fuel subsidy reforms. Therefore, efforts to encourage economic performance, alleviate fiscal imbalances, inflation as well as exchange rate, are essential to reform implementation and success. Related to this, reform experiences in most developing countries have shown that reforms implemented under improved standards of living and stable prices were politically palatable and successful (Clements, et al. 2013a, Plante, 2014).

✓ **Welfare implications on the poor and vulnerable households**

Despite the regressive nature of subsidies as they reap benefits for higher-income groups, there are significant linkages to lower-income groups. Petroleum products, especially LPG and kerosene products, are used by middle and low-income households for cooking, lighting, and heating both directly and indirectly. Many scholars hold the view that the increase of petroleum prices stemming from subsidy elimination would inflict both direct and indirect impacts on households. The direct effect displays through the rising of the fraction of household income expenditures dedicated to the purchase of energy necessary, such as LPG and kerosene, for cooking lighting, and heating. The indirect effect manifests itself in the spike of the price of other goods and services using petroleum products as inputs in their production (Saboohi, 2001; Arzed el Granado et al. 2012; Coady et al. 2015b).

Scholars have reported similar findings regarding the substantial welfare effects of reforms on poor and vulnerable households. There's near unanimity among empirical modelling studies (Nwafor et al. 2006; Lin and Jiang 2011; Liu and Li, 2011; Siddig et al. 2014) outlining that phasing out subsidies would give rise to the level of national poverty and compromise the welfare of households in different expenditures' groups, notably in developing countries. The authors argue through results of CGE models that domestic price liberalization will have sustained

implications on welfare, GDP, employment, and on the cost of living of both rural and urban households, particularly poor groups in the rural areas. In this sense, an increase in social safety net developing systems investment through the savings of the subsidy reform is crucial to tackling its negative effects (Clements, et al. 2013a).

✓ **Burdens Imposed from Powerful Interest Groups**

According to political economy researchers, interest groups tend to solidify around subsidies making reforms difficult to meddle by governments (Inchauste and Victor, 2017; Victor, 2009). This is mainly because fossil fuel subsidies create considerable profits for interest groups, for example, stakeholders of private oil and gas companies. These interest groups can be organized in different forms and vary in their ability to influence the reform policy (Commander, 2012). Most fossil fuel subsidies are embedded in the vital activities (mainly production and consumption of fossil fuels) classified as the spine of the economy for most developing countries. Consequently, these rent-seeking groups (in the form of subsidies) benefiting from these powerful structural relations can block reforms, so they can safeguard their profits.

✓ **Institutional and governance capacity of governments**

The existing literature on fossil fuel subsidies' political economy is extensive and focuses particularly on political factors that undermine these subsidies and their reforms. The developing countries' experiences demonstrate that political economy problems are the most serious obstacles to reforms (Cheon, Lackner, and Urpelainen, 2015; Fattouh and El-Katiri, 2012, 2017; Kojima and Koplow, 2015).

Importantly, these studies have postulated that discerning and identifying political economy challenges of fossil fuel subsidy reforms are the foundation of the success of their reforms.

Another shred of researchers has outlined that most governments in developing countries lack the administrative competence required for conceiving and implementing well-targeted social assistance policies. They have also presented a set of structural factors hampering subsidy reforms related to governance and institutional capacities such as the form of the state granting subsidies, the type of political system (authoritarian or democratic), and path dependency (Rentschler and Bazilian, 2017b; Skovgaard, and van Asselt, 2018; Strand, 2013). Fossil fuel subsidies are embedded in developing countries that are defined by weak institutional structures, authoritarian political systems, and abundant fossil fuel reserves (Inchauste and Victor, 2017; Victor, 2009). Thereby, governments of these countries use subsidies to entice citizens to vote for them (Cheon, Urpelainen, and Lackner, 2013; Commander, 2012) as they play a key role in consolidating the state's political power.

**Discussion**

Based on the knowledge found, this paper has explained the current triggers and obstacles of fossil fuel subsidy reforms in developing countries. Through analysis of the literature, we have found that the most recent studies have grouped drivers of fossil fuel subsidy reforms into four categories: economic, social, environmental, and political. Even though countries' experiences in reforms have common attributes, they vary in terms of conception, breadth of reform, and speed of adaptation. Key drivers and barriers identified are synthesized in Table 1.

**Table 1: Drivers and barriers of fossil fuel subsidy reforms in developing countries**

	Category	Sub-Category	Total of articles	References
Drivers	Economic factors	Fiscal Strain on the Governments	21	[1], [2], [3], [4], [5], [6], [7], [8], [9], [10], [12], [14], [15], [16], [19], [26], [34], [35], [36], [68], [70], [71], [73]
		Economic cost of fossil fuel subsidies	27	[1], [2], [5], [6], [7], [10], [12], [13], [15], [16], [19], [25], [27], [29], [30], [31], [35], [39], [40], [47], [51], [52], [53], [54], [59], [68], [70]
		The role of International oil prices	14	[3], [8], [9], [15], [16], [18], [23], [24], [26], [27], [51], [52], [54], [68]
	Environmental factors	Environmental cost of fossil fuel subsidies	18	[9], [25], [29], [30], [31], [33], [34], [38], [42], [44], [46], [48], [52], [57], [58], [60], [71], [72]
	Political factors	International commitments and donor pressure	6	[3], [9], [22], [52], [62], [63]
	Social factors	Equity implications	27	[4], [6], [7], [10], [11], [13], [14], [20], [21], [24], [28], [30], [37], [39], [43], [45], [49], [50], [51], [52], [55], [56], [57], [59], [61], [67], [68]
Barriers	Political factors	Lack of information and adequate communication	8	[10], [17], [23], [32], [51], [63], [68], [69]
		Lack of credibility and confidence in governments	9	[3], [10], [23], [32], [62], [66], [68], [69], [72]
		Burden imposed from powerful interest groups	8	[10], [17], [23], [32], [59], [63], [66], [69]
	Economic factors	Weak macroeconomic conditions	11	[10], [35], [37], [38], [47], [52], [59], [60], [66], [68], [72]
	Social factors	Welfare implications on the poor and vulnerable households	18	[20], [10], [13], [27], [49], [52], [41], [42], [45], [50], [55], [56], [57], [59], [61], [67], [68]
	Institutional factors	Institutional and governance capacity of governments	10	[12], [17], [23], [24], [32], [36], [52], [63], [66], [69]

Source: Comprised by Authors

Throughout our research, we have identified far more barriers than drivers to fossil fuel subsidy reforms. The literature on triggers of reforms focuses on social inequality aspect.

Most barriers are political, as the examination of the experiences of fossil fuel subsidies in developing countries revealed that most reforms fail due to political economy problems mainly. Lack of information and adequate communication to the public, lack of credibility and confidence in governments, burdens imposed from interest groups are all

political factors that have hindered the reforms in many developing countries. Subsidy reforms often face hurdles from citizens in the form of protests and public strikes because they are unaware of the harmful effects of these subsidies on the economy and social infrastructures. Strong political leadership is therefore required to implement clear and credible communication plans to raise the awareness of the public. Further research is required in this area as it is often difficult to determine citizens' policy preferences and the alternative policies that can be accepted instead of fossil fuel subsidies.



A wide array of countries hesitates to undertake free domestic energy prices so that they can bypass strong volatility in local energy prices induced by the rise of international oil and gas prices (Rentschler and Kornejew, 2017d). In this sense, most of the literature reported the necessity of assessing the macroeconomic situation of a country before conceiving and implementing fossil fuel subsidy reform. Thus, understanding and analyzing the drivers of these reforms can be useful to address to those barriers.

The scope of social barriers is also of importance as many reforms failed due to the potentially harmful implications on different groups of households, especially the poor and vulnerable ones. Many studies highlighted the potential risk of increased poverty and adverse effects on the GDP, employment, and cost of living. Fear of public opposition has deterred governments in most developing countries from reforming these subsidies as they are incapable of conceiving effective mitigating compensatory measures and thinking of fossil subsidy reforms as a part of a larger reform. Further research in the area of evaluating the social effects and their magnitude is required as the existing literature is largely evasive with little attention to the indirect effects on households.

#### **Conclusion and recommendation for further research**

Numerous developing countries have initiated fossil fuel subsidy reforms by drafting strategies and a set of alternative measures. Nevertheless, the road towards market-based-energy pricing in developing countries is bumpy as the economic, social, and political circumstances of these countries hinder this transition. Against this background, this paper identified existing motivators for fossil fuel subsidy reforms and their different barriers in order to provide a foundation for future research in means to overcome these obstacles. Understanding the different categories of drivers and barriers of these reforms is the key to their success.

Our analysis distinguishes four categories of drivers: economic, political, social, and environmental. The same categories are also used in the classification of barriers with the addition of the institutional factor. The main drivers for reforms are economic factors and the strongest barriers to reforms are political factors. The dimension of political economy is therefore considered in implementing fossil fuel subsidy reforms. These subsidies are usually structurally embedded in developing countries, they usually require long-term structural solutions. Taking into account all these analyses, the following conclusions can be drawn: fossil subsidy reform design and implementation for any country will differ depending on a range of factors, including which type of fossil fuel is subsidized, the policy instruments used to grant subsidies conditions of the local energy market, the political context and public perceptions. There is no standard plan for reform to fit all countries. Regarding developing countries, policy advice can most focus on the planning process to formulate a robust, country-specific reform strategy. The characteristic of a good plan is its ability to set out a foundation for a market-based pricing mechanism. This paper creates a basic framework for further research related to determinants of the success of fossil fuel subsidy reforms.

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