K4D | Knowledge, evidence and learning for development

Links between energy prices, fuel subsidy reform and instability

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Question

- *What is the latest evidence on the links between energy prices and the risk of political instability and conflict?*

Contents

1. Summary

Increasingly, the links between energy insecurity (including energy prices, availability, and fuel subsidy reform) and instability are being studied. These issues often become flashpoints for social mobilisation and protest; energy protests[1] are both historical and highly current and occur across varied contexts (rich and poor, stable and fragile, energy exporting and import dependant) and in various forms (localised protests about electricity, urban uprisings about fuel prices, protests against new energy deals) (Hossein et al., 2021). Previous research has started to explore different types of fuel-related conflict and its relationship with scarcity, abundance, and energy prices but the research is fragmented. Much of this existing research focuses on a possible link between oil and armed conflict and rebellion, rather than on fuel prices as a source of intra-state instability below the level of armed conflict. The emergence of "fuel riots" (or energy protests) as a distinct type of conflict has been recognised more recently in academic circles, and research remains nascent (Natalini, Bravo & Newman, 2020; Hossein et al., 2018). The links between fuel subsidy reform and the potential for conflict (including fuel riots) has been seen anecdotally in a number of countries over the past 10-15 years, such as in Sudan in 2013, France and Jordan in 2018, Egypt, Iran and Ecuador in 2019 and as recently as January 2022 in Kazakhstan[2]. It is argued that this research gap is important as these protests often have the potential to escalate into broader political movements, and the pressures to reduce reliance on carbon-heavy fuels through increased taxation or the reduction of subsidies (and hence increase consumption costs) is increasing.

The recognition that fuel subsidy reform needs to be carefully planned and implemented to reduce the impact on users and reduce the likelihood of (violent) negative responses has been accepted in mainstream channels, for example, the guidance on fuel subsidy reform from the Global Subsidies Initiative (GSI) (Beaton et al., 2013) and recent papers from UNDP (2021) on fossil fuel subsidy reform. Although, a key point is that rising fuel prices does not always lead to protests or significant resistance – demonstrating the importance of context and also the links to legitimacy in governance and the cultivation of popular support for change (Natalini, Bravo & Newman, 2020: 2). As with any conflict, the nature of power and context are key in shaping patterns of civic engagement and popular political contention (Hossein et al., 2018).

Although there is a growing body of research looking at instability related to rising energy prices and changes to fuel subsidies, this research is in its infancy and the literature body remains small and is more limited when it comes to developing countries and fragile settings. Evidence is also limited on the mechanisms that may explain the association between shocks in international oil prices and conflict (McCulloch et al., 2021: 9). While fuel riots and protests have not been confined to fragile and conflict-affected settings only, Hossein et al. (2018: 9) argue that "there are good reasons to believe that such protests may have a particular significance in contexts where more formal or institutionalised forms of democratic and civic space have historically been restricted or repressed." The COVID-19 pandemic has further exacerbated the interacting and complex risks faced by many fragile states, as governments' response to COVID-19 further stretches fiscal capacity, while a new scale and depth of hardship magnifies existing grievances

[1] This rapid review uses the terms energy protests and fuel riots interchangeably.

[2] https://www.reuters.com/markets/commodities/kazakhstan-reminds-world-leaders-costly-fuel-subsidy-dilemma-2022-01-06/ [accessed 03/02/2022]

or creates new ones (Rose & Plant, 2021). A recent concerted effort by researchers has started to explore in more depth the nature of political power arrangements which give rise to or enable energy protests to emerge (for example, Natalini, Bravo & Newman, 2020; see also Demanding Power: Struggles Over Energy Access in Fragile Settings project[3] and project references from Hossein et al., 2018, 2021 and McCulloch, 2021).

This rapid review provides an overview of the evidence on the links between energy prices, subsidy reforms and the risk of instability. It first highlights these links and discusses the literature, and then provides some brief evidence on recommendations and lessons learned on managing the impact of subsidy reform processes. The review was unable to identify any indicators of risk or quantitative metrics for appraising energy-related instability, apart from the unique fuel riots database created by Natalini et al. (2020). This rapid review takes a wide view of "instability" and what that means. The literature was largely gender-blind and did not consider issues of disability.

Key findings:

- The fuel riots database developed by Natalini, Bravo and Newman (2020) is the first of its kind. It identifies scarcity and price, and therefore access to fuel, as the principal factors driving the fuel riots investigated (between 2005-2016). It's initial evidence suggests that fuel riots are connected to the level of economic development, the level of political stability and the quality of governance in a country.
- McCulloch et al. (2021) used Natalini, Bravo and Newman's (2020) database and extended it to cover 2005-2018. They find that fuel riots are primarily driven by domestic price increases, which reflect international oil price changes to some extent, but these effects are mediated by how countries attempt to protect their populations by fixing domestic prices for periods of time (McCulloch et al., 2021). Large fuel subsidies may make fuel riots more likely, as the price changes introduced when such subsidies become financially unsustainable are much larger than those that occur in countries with more flexible energy prices (McCulloch et al., 2021; Hossein et al., 2021).
- Hossein et al. (2018) also highlight that energy protests were also rooted in moral economy arguments about the basics of everyday life.
- Countries around the world are grappling with the need to achieve a just transition away from fossil fuels while at the same time ensuring access to affordable energy. Protests often have a common root cause: the undemocratic nature of energy policymaking (McCulloch, 2021).
- Little attention is paid to the effectiveness of policy responses and strategies to fuel subsidy reform in terms of impacts on stability or how to address citizens' energy grievances (Boys & Walsh, 2020; Hossein et al., 2021) There is generally little rigorous research on the drivers of public opinion about fuel subsidy reforms in developing countries (McCulloch, Moerenhout & Yang, 2021).

[3] This workstream (April 2019 – December 2020) was part of the Action for Empowerment and Accountability (A4EA) programme (2016 – 2021) at IDS. https://www.ids.ac.uk/projects/demanding-power-struggles-over-energy-access-in-fragile-settings-a4ea/

2. Linkages between energy prices, fuel subsidy reform and instability

Research into energy-related conflict

Increasingly, the links between energy insecurity (including energy prices) and instability are being studied. Previous research has explored different types of energy-related conflict and its relationship with scarcity, abundance, and energy prices (especially in relation to oil and the "resource curse") but the research is fragmented and often points to contradictory results (Natalini, Bravo & Newman, 2020). Much of this research focuses on a possible link between oil and armed conflict and rebellion, rather than fuel prices as a source of intra-state instability below the level of armed conflict (such as riots). There is strong evidence that conflict and unrest may be related to increases in oil prices. For example, Dube and Vargas (2013) in their seminal paper, show that violence increases in Colombia's oil-producing municipalities as the international price of oil rises. A recent paper by Blair, Christensen and Rudkin (2020) reviews 350 quantitative studies and concludes that the probability of conflict is positively associated with increases in oil and gas prices (capital-intensive commodities). Ortiz et al. (2013: 5) in their analysis of 843 protest events occurring between January 2006 and July 2013 in 84 countries, found that "the majority of violent riots counted in the study occurred in low-income countries (48% of all riots), mostly caused by food-price and energy-price spikes in those countries." A more recent updated book by Ortiz et al (2021), *World Protests: A Study of Key Protest Issues in the 21st Century*, analyses 2,809 protest events that occurred between 2006 and 2020 in 101 countries.[4] They find that fuel and energy subsidy reforms and the resulting unaffordable energy prices were a factor in 5% of protests events (136 events) (e.g. in Algeria, Cameroon, Chile, Ecuador, India, Indonesia, Mexico, Mozambique, Nicaragua, Niger, Peru, Sudan, and Uganda) (Ortiz et al., 2021: 34). Protests have also related to energy shortages and outages, for example in Pakistan, Zimbabwe and Myanmar (Hossein et al., 2018: 36).

Energy protests have been recurrent and significant political events in the twenty-first century; in most years between 2005 and 2018, there have been energy-related riots in at least one or two countries (McCulloch et al., 2021). Energy protests have erupted in wide-ranging contexts – rich (France, UK) and poor countries (Haiti, Mozambique); in stable states (France, Chile) as well as in more fragile and conflict-affected states (Mozambique, Haiti); in energy exporting countries (Nigeria, Mozambique) and those dependent on imports (India, Lebanon) (Hossein et al., 2021: 7; McCulloch, 2021: 2). The types and expressions of protest also took a wide variety of forms, apparently shaped by political context (Hossein et al., 2018: 32).

The emergence of fuel riots (or energy protests) as a distinct type of conflict has been recognised more recently in academic circles, but research remains nascent and there is limited academic literature that explores the determinants of such riots (Natalini, Bravo & Newman, 2020; Hossein et al., 2018; McCulloch et al., 2021). Evidence is also limited on the mechanisms that may explain the association between shocks in international oil prices and conflict (McCulloch et al., 2021: 9). It is argued that this gap is important as these energy protests often have the potential to escalate into broader political movements, and the pressures to reduce reliance on carbon-heavy fuels through increased taxation or the reduction of subsidies (and hence increase

[4] See also the website World Protests Platform for a visual representation of this data: https://worldprotests.org/#/

consumption costs) is increasing (Natalini, Bravo & Newman, 2020). Furthermore, fuel riots often pre-empt or prevent further attempts at policy dialogue and reform (Hossain et al., 2021). While fuel riots and protests have not been confined to fragile and conflict-affected settings only, Hossein et al. (2018: 9) suggest that "there are good reasons to believe that such protests may have a particular significance in contexts where more formal or institutionalised forms of democratic and civic space have historically been restricted or repressed."

Hossein et al. (2021) argue that this modern day increase in energy protests signals the importance of energy as a matter of rights and justice; protests may also block fossil fuel subsidy reforms, which has important connotations for climate action. Energy protests also matter as they are part of a "rich ecology of resistance" that will determine the pathways of energy transitions (Newell, 2021: 172 cited in Hossain et al., 2021: 16). Research on energy protests is seen as not only having potential to explain the politics of energy transitions, but also sheds light on the nature of politics more broadly. For example, drawing attention to bigger questions about the nature of the relationship between citizens and the states mandated to ensure access to the modern forms of energy citizens need for daily life (Hossein et al., 2021: 17).

Database on fuel riots

Natalini, Bravo and Newman (2020) were some of the first authors to put forward "fuel riots" as being a distinct type of energy-related conflict. They define fuel riots as "incidents of significant unrest – riots, demonstrations, major protests – where grievances over fuel prices, the prospective removal of subsidies, or fuel availability were specifically identified as a factor which motivated people involved in the violent event" (Natalini, Bravo & Newman, 2020: 3). Fuel in this context is taken as a refined product such as gas or oil used for essential heating, cooking, and for running vehicles. Although fuel-related grievances need not be the only factor which drives incidence of instability (as multiple stressors can combine), Natalini, Bravo and Newman (2020: 2) argue that they must be seen as an explicit contributing factor.

Natalini, Bravo and Newman (2020: 1) using this definition, collected data for fuel riots for the period 2005–2016 to provide "the first fuel riots database." The methodology used to create the database included an exhaustive search of publicly available media sources using combinations of keywords to identify news articles in English; reports of events were corroborated by double checking to confirm relevance and avoid duplication; this "manual" data collection constituted the best and easiest option to avoid duplicates and to collect a database that was accessible and open-source. The key factor in their methodology was the rigorous application of the definition of fuel riots in identifying cases, "in order to ensure that the events reflected a reliable global picture of instability related to fuel price increases" (Natalini, Bravo & Newman, 2020: 4). The final database contains 59 records of fuel riot events.[5] No other database of this kind was identified during this rapid review. The authors used a number of statistical models and other data sources to explore their hypotheses and different factors (such as international fuel prices, political stability and government effectiveness) (see Natalini, Bravo & Newman, 2020: 4-5 for an in-depth discussion of their methodology and data sources).

The database shows that fuel riots are "not confined to any one geographical area, nor does it show a clear developed/developing country divide, but rather every continent and countries with

[5] This database is available in the article's supplementary material (https://doi.org/10.1016/j.enpol.2020.111885).

different characteristics can experience these events" (Natalini, Bravo & Newman, 2020: 3). The countries that experienced the largest number of fuel riots throughout 2005-2016 are India (6), Indonesia (5), China (3), Yemen (3), Nepal (2), France (2) and Italy (2), with all other countries experiencing only one episode. The effects on instability of energy price increases can be as a result of external inflationary pressures or the withdrawal of price subsidies.

Their data found that fuel riots were significantly affected by: high international fuel prices, national political instability and government ineffectiveness, national scarcity of the resource, and national economic development (Natalini, Bravo & Newman, 2020: 2). Furthermore, "Politically unstable countries are more likely to be affected by fuel riots, as are those characterised by ineffective governance which are larger importers of fuel products. Conversely, the level of economic development of a country has a significant (negative) effect on the occurrence of riots, meaning that wealthy countries are less likely to experience fuel riots" (Natalini, Bravo & Newman, 2020: 7). They also find that regime type (e.g. totalitarian regimes vs democracies) does not significantly impact the occurrence of fuel riots and are all similarly susceptible. Natalini, Bravo and Newman (2020: 7) conclude that "fuel riots are more likely (globally) when the international price of crude oil is high. The countries most affected are those characterised by low levels of national political stability and ineffective governance. Being a net fuel exporter and having high levels of GDP per capita make countries less likely to experience such events."

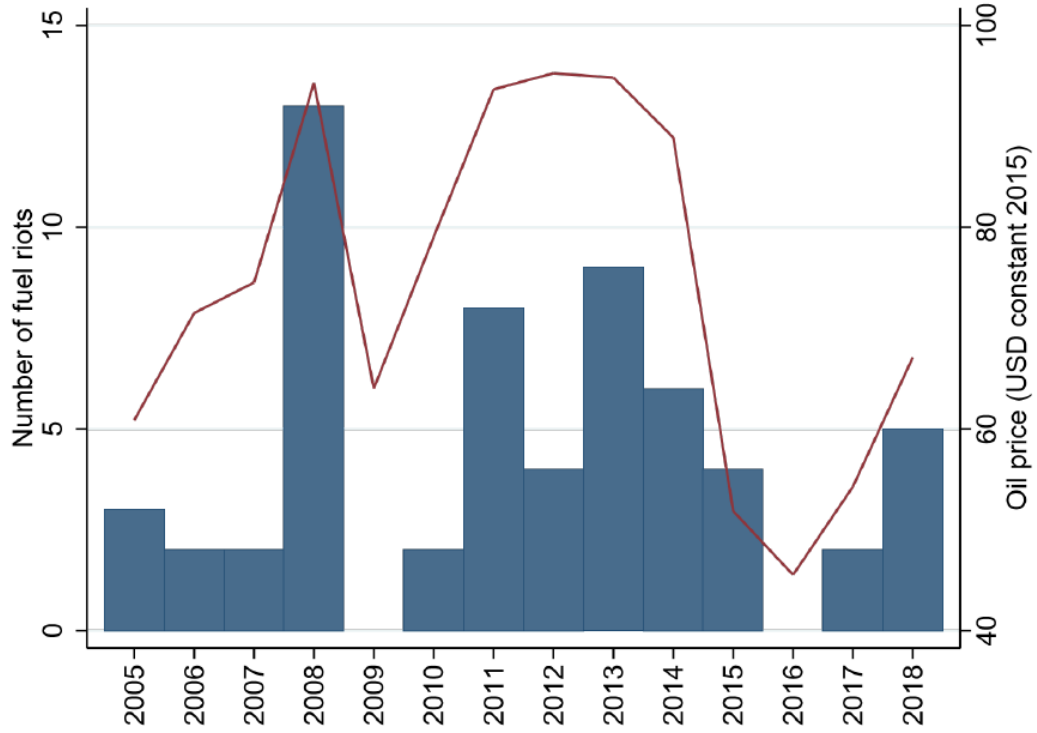
Natalini, Bravo and Newman (2020) argue that the link between fuel insecurity and instability is increasingly acute in fragile and conflict-prone societies, as a result of state incapacity in parallel with growing demands on the part of consumers. Hence, Natalini, Bravo and Newman (2020) consider that higher international fuel prices are capable of tipping an already fragile situation into open conflict and violent demonstrations in net fuel-importing countries, which are more exposed to higher prices. Although a key point is that rising fuel prices do not necessarily result in protest or significant resistance (Kyle, 2018 cited in Natalini, Bravo & Newman, 2020: 7). Hence, the management of fuel subsidy reform and the mitigation of the impact of this reform is critical.

International energy prices and domestic price increases

McCulloch et al. (2021) draw on Natalini, Bravo and Newman's (2020) fuel riots database to explore the association between fuel riots and fuel price shocks. The authors updated the original database, which spanned the period between 2005 and 2016, to also include up to 2018 using the same methodology. To understand the relationship between prices, subsidies and fuel riots, data was obtained on the international price of oil (from World Bank's Commodity Price Database), the level of fuel subsidies (from the International Monetary Fund (IMF)'s calculation for 'total consumer pre-tax subsidies' for the period 2010–17), and the domestic price regime implemented in each country (based on an analysis of monthly price changes in the data set of international and domestic gasoline prices for 157 countries from 2003–15 compiled by Ross *et al*. (2017 cited in McCulloch et al., 2021: 13)). They also include country-level gross domestic product (GDP) per capita and population as controls in their analysis, as well as data from the Varieties of Democracy (Coppedge *et al*. 2019 cited in McCulloch et al., 2021: 15) and the Polity IV data sets (Marshall 2019 cited in McCulloch et al., 2021: 15) to represent different aspects of governance which might also influence fuel riots.

McCulloch et al. (2021) find a positive association between international oil prices and fuel riots (as largely expected and touched on elsewhere in Dube and Vargas (2013) and Blair, Christensen and Rudkin (2020) – see Figure 1). In addition, they find that fuel riots are closely associated with domestic price regimes – finding that fuel riots are primarily driven by domestic price increases (McCulloch et al., 2021: 4). “To some extent, these reflect changes in the international oil price, but these effects are mediated by how countries attempt to protect their populations by fixing domestic prices for periods of time. [Their] results show that large subsidies may make fuel riots more likely in countries…[, as] When such subsidies become unsustainable, domestic price adjustments are large, often leading to riots” (McCulloch et al., 2021: 27). However, McCulloch et al. (2021: 27) also note that “As long as domestic price regimes are sustainable, it is unlikely that changes in the international price of oil will affect local markets and, therefore, the probability of riots occurring.” These results are robust when tested for different definitions of the dependent variable (McCulloch et al., 2021: 9). Countries which are net energy exporters are much more likely to have large subsidies, as are countries with low levels of government capability and effectiveness. They further argue that these results are significant as the existing literature on civil unrest rarely takes into account how fluctuations in international prices of oil may be transmitted to local markets in ways that may lead citizens to riot.

Figure 1: Fuel riots and international oil prices (2005-2018)



Source: McCulloch et al., 2021: 14. Reproduced under Creative Commons Attribution 4.0 International license

The role of subsides and reform

Fuel prices can be subsidised by governments for a variety of reasons—economic, social, and political. The benefits of a subsidy are often visible to the public (who benefit from lower and relatively predictable prices), but the policy’s costs tend to be obscured (Rose & Plant, 2021: 3).

Costs can be high, especially when international prices are substantially higher than domestic prices charged and government spending to pay the wedge between local and international prices can crowd out other forms of public spending. Furthermore, fuel subsidies are notoriously inefficient at helping the poor; especially where regressive taxation finances fuel subsidies, which magnifies the inequitable distribution of costs and benefits across income groups (Coady, Flamini & Sears, 2015; Rose & Plant, 2021).

Evidence from Hossein et al. (2021) also suggests that large energy subsidies increase the likelihood of riots, as the price changes introduced when such subsidies become financially unsustainable are much larger than those that occur in countries with more flexible energy prices. Furthermore, "protests were often triggered by grievances where formal channels – political parties, civil society, independent media – were [absent,] blocked or weak" (Hossein et al., 2021: 8). However, there is limited evidence that energy protests leads to empowered citizens with respect to energy policy over time, as any meaningful gains in citizen power were short-lived or diffuse (Hossein et al., 2021). However, another important finding is that while economic and political conditions in fragile states may create opportunities for such protests to escalate, energy protests can also create or contribute to fragility and delays in reforms, depending on how governments respond (Hossein et al., 2021: 18). For example, in Nigeria, government efforts to reform fuel subsidies in the interests of reducing fiscal imbalances (as well as improving equity) have repeatedly been put on hold because of fears of mass protests against higher-priced energy (Hossein et al., 2021; Atela et al., 2021).

In Myanmar (2007), Egypt (2008-13), Mozambique (2008-10) and Nigeria (2012 – see Box 1), cuts in fuel subsidies led to protests. In all cases a key policy response was the reinstatement of subsidies, at least in part, but only temporarily in most cases (Hossain et al., 2018: 18-19; Boys & Walsh, 2020: 3-4). Subsidy reinstatement did not stop unrest because in all of these cases energy protests underwent a 'scale-shift', i.e. transformed from a specific grievance around fuel prices to part of a broader political challenge to state authority. Although fuel price changes were triggers, the protests arose for myriad social, political and economic reasons (Hossain et al., 2018). Consequently, policy responses must also address underlying drivers, rather than simply reverting to the previous policy status quo (Hossain et al, 2018; Boys & Walsh, 2020: 3-4).

While resistance to subsidy reform can be lower during periods of high growth and low inflation, the impetus for subsidy reform often comes from the risk of fiscal crisis (which can also increase the credibility and political palatability of a reform agenda) (Rose & Plant, 2021: 3). Pressure to remove subsidies is particularly acute when high international fuel prices make the subsidy's fiscal cost unsustainable. Lower international prices can ease the shock of a shift to market pricing and buy some time to implement any compensatory measures that are needed to smooth the adjustment (Coady, Flamini & Sears, 2015). But while low international prices represent an opportunity, it may be fleeting; without firm government commitment to an automatic price adjustment formula, subsidies can re-emerge as resistance develops to ad hoc upward price adjustments. (Rose & Plant, 2021: 3). Fragile states in particular must confront challenges with reform – including economic, technical and political-economy risks.

Further research into energy protests is still needed. Specifically to understand the similarities and differences between different types of energy-related protests, through, for example, the development of a taxonomy of protest (McCulloch, 2021: 4). Areas of interest include (taken from

an International Roundtable[6] on 20 September 2021 discussing the work of the Demanding Power: Struggles Over Energy Access in Fragile Settings project): *Why do some price increases for fuel or electricity give rise to protests while others do not?* A better understanding of the wider political and economic context may help to explain how energy policies interact with other concerns leading to protest.

Box 1: Fuel subsidy reform and protests in Nigeria

In Nigeria, the period 2007–17 was marked by almost two weeks of violent protests over fuel price rises that took place between 3 and 16 January 2012. The demonstrations aimed to enact popular outrage at the scrapping of a government-funded subsidy that artificially kept petrol, diesel and kerosene prices as low as 26p a litre. Overnight, prices had risen to more than 56p a litre. Hitting the poorest hardest. The pressures on the Nigerian state from the fuel subsidy were significant, amounting to some US$2.5bn annually.

Protests around fuel subsidy removal in Nigeria have a long history but had rarely been so big or widespread before 2012, or connected so many different actors. Timing was a factor: the announcements took place during the Christmas holidays, when many people had gone home and found they were unable to return. Subsidy cuts were not what the people had voted for in the recent 2011 elections.

Early on, a connection was being drawn between corruption and the need to reform the fuel subsidy. The fuel price rises became connected to charges of corruption. The Opposition party was active, addressing crowds, sometimes supporting protests. These became very clearly expressions of accountability, compared to previous protests around fuel price hikes.

It is notable that fuel subsidy cuts in 2016, by contrast, provoked no protests, and the contrast between the two highlighted the importance of political context: the President in 2012 faced many complaints of corruption, in which context the withdrawal of the subsidy was seen as siphoning off the modest benefits drawn by the majority of citizens for yet further corrupt uses. By contrast, in 2016, the President had the image of an honest man, an anti-corruption crusader. His government framed the subsidy removal as part of the fight against corruption. Overall, what mattered was differences in public trust, perhaps particularly among the key organising actors, and the timing of the reform initiative itself.

Atela et al. (2021: 4) conclude that “accountability and empowerment outcomes of the struggles over fuel access in Nigeria are severely limited by the very conditions that define the state as fragile: weak institutions, elite capture, widespread corruption, and a citizenry that is protest-fatigued and disempowered.”

Source: Hossein et al. (2018: 26-28); Atela et al. (2021)

[6] Watch at https://www.youtube.com/watch?reload=9&v=paVz_nqC6ew

Methodologies used

The three papers that have created some form of database of protests related to energy (Ortiz et al., 2013; Hossein et al., 2018; Natalini, Bravo & Newman, 2020) all use similar research methodologies, namely, protest event analysis or Event Mapping/Media Review. This was developed by sociologists to map, analyse and interpret occurrences and properties of large numbers of protests by means of content analysis, via sources such as online newspaper reports (Ortiz et al., 2013: 9). Although the search terms and criteria are different for each study, in particular, their definition of "protest." All are cognisant of the potential for bias in the collection of news reports in the PEA methodology, and so aim to counteract this via certain routes (e.g. Ortiz et al. (2013: 11) include at least one internationally or regionally recognised media source per country covered, augmented by at least one local or independent news, academic or organizational source per country). The studies then also use an array of statistical methods and additional data sources to analyse their databases and to provide a basis for comparing contexts across the countries.

3. Managing fuel subsidy reform processes

Addressing root-causes of energy-related instability

Research by political scientists on protests and policy responses often focuses on the extent to which protest movements achieve their desired policy outcomes; there is little attention to the effectiveness of responses in terms of impacts on stability (Boys & Walsh, 2020: 3). Hossein et al. (2021: 19) also caution that current subsidy reform strategies "offer no evident innovations with respect to how to address citizens' energy grievances beyond violence or short-term appeasement." The literature also notes that there is generally little rigorous research on the drivers of public opinion about fuel subsidy reforms in developing countries, an important gap in the literature (McCulloch, Moerenhout & Yang, 2021).

Removing subsidies on fossil fuels and putting a price on carbon are seen as key to reflecting the true social and environmental costs of carbon-intensive activities, sitting at the heart of an effective market-based solution to climate change (Rentschler & Bazilian, 2017). However, in practice, the key rationale for implementing subsidy reform has typically been fiscal rather than environmental, and past fuel subsidy reforms have had a mixed track record, often resulting in violent protest. Lockwood (2015) highlights how fuel subsidy reform is almost always politically controversial. Many countries have experienced (violent) protests in response to attempts to reduce fuel subsidies over the last 10-15 years, such as in Indonesia, Sudan, India and Jordan. However, on occasion, subsidy has been reduced without violence, in cases such as Ghana and Indonesia in the mid-2000s and Iran in 2010.

Hossein et al. (2021) highlight two key policy and practice implications of their research into energy protests. Firstly, that "these protests signal that energy security[7] is shaping up to be a wicked problem: it involves many competing interests, there is no 'correct' solution, and information about the issue is always incomplete (Rittel and Webber 1973)" (Hossein et al., 2021: 9). Secondly, "that it is necessary to address institutional failures to hear and respond to citizens'

[7] Defined by the International Energy Agency as demands for reliable, affordable access to fuel and energy.

energy concerns…[Although] there is no guarantee that improving citizen participation in energy policymaking will resolve this wicked problem[,] …enabling citizens to voice their energy grievances through non-riotous means is an [untried] entry point…in countries with large fossil fuel subsidies and a history of mass protest" (Hossein et al., 2021: 9-10).

A "just transition"

The need for a "just transition" to a low-carbon economy is gaining traction in climate policy and political discourse, especially the need to ensure that low-carbon transitions address social and economic inequality (Piggot et al., 2019). Better understanding energy protests also offers insights into debates about fossil fuel subsidy reform and 'energy justice' and how it might be achieved, which underscore the importance of civic participation, transparency and accountability in progress towards 'just transitions' (Hossein et al., 2021: 7). Piggot et al. (2019: 1) argue that "collecting data on the current distribution of the harms and benefits of the energy system, and mapping out how this will change as fossil fuels become a less-prominent part of the energy mix" is crucial to creating just and equitable transition policies. Taking justice considerations into account will also likely help to limit social and political resistance to transition policies and win broad consensus to achieve effective implementation. For example, an IMF working paper by Coady, Flamini & Sears (2015) explores who benefits from fuel price subsidies and the welfare impact of increasing fuel prices finding evidence that "fuel subsidies are badly targeted, mainly benefiting higher-income groups, and are fiscally costly. But the withdrawal of subsidies can have a sizable impact on household welfare, including that of lower-income groups" (Coady, Flamini & Sears, 2015: 16).

McCulloch (2021) adds to the just transition discussion, arguing that this will only be possible globally with much greater engagement of citizens about energy policy. Currently, energy policymaking is often opaque, and the sector is treated by the international energy community as a technical field with limited efforts to engage citizen participation or improve accountability and transparency. McCulloch (2021: 1) argues that "The absence of credible mechanisms of consultation or ways of expressing grievances means that citizens often resort to protest when governments implement large fuel or electricity price increases."

Managing fuel subsidy reforms

Understanding who benefits from the existing subsidies and how the proposed changes are likely to impact welfare across income and special interest groups is central to any subsidy reform plan (Rose & Plant, 2021: 4). This helps governments to manage responses through careful timing, sequencing, and adoption of targeted compensatory measures. Also key to the reform is depoliticising energy pricing; "adopting an automatic pricing mechanism as part of a broader reform package can help reduce the risk that reforms will be reversed" (Rose & Plant, 2021: 5). Another key component of many subsidy reform efforts is planning policy alternatives that mitigate the impact of price increases, including through cash transfers. A communications plan is key to the implementation of subsidy reform, centring messages around the importance of the reform.

The key elements for designing effective integrated fossil fuel subsidy reform include (Rentschler & Bazilian, 2017: 904-906):

- Assessment of subsides and pricing mechanisms – including a coherent subsidy definition and a precise understanding of the quantity of subsidies and their beneficiaries.
- Building public and political support - timely and transparent communication, public engagement and consultation processes are critical, clearly communicating the benefits of reform.
- Social protection and compensation – communication strategies must clearly indicate how subsidy removal will be paired with effective social protection and compensation schemes that mitigate adverse effects on the population.
- Revenue redistribution and reinvestment – to ensure that the reform contributes to sustainable development and climate change mitigation.
- Complementary measures – while subsidy removal will help to relieve national budgets, further actions will probably be needed to facilitate and stimulate low-carbon innovation and investments and ensure that subsidy reforms contribute to low-carbon development.
- Pricing policies – a complete fuel subsidy reform is not only about removing subsidies, but also requires an integrated strategy featuring a range of carefully designed and sequenced policy measures.

Furthermore, Rentschler and Bazilian (2017: 906) highlight that "despite differing priorities and political dynamics, these principles are applicable to both producer and consumer subsidy reforms." The GSI IISD guidance (Beaton et al., 2013) recommends a gradual approach to raise subsidised fossil-fuel prices, rather than a sudden "Big Bang" approach. A gradual approach allows strategies to adapt based on the outcome of each successive subsidy reduction – although some countries (with very large subsidies or intractable political opposition) may have no choice but to plan large reforms. It also recommends that the most advantageous timing to reform is usually to change a subsidy mechanism when market-based fossil-fuel prices are falling, particularly for "big bang" reform, as price shocks are minimised (Beaton et al., 2013: 4).

A number of K4D helpdesks have explored subsidy reform including: looking at the political-economy of fossil fuel subsidies and their reform in the Middle East and North Africa (MENA) (Walsh & Boys, 2020); lessons from subsidy reforms in the MENA region (Megersa, 2020); and economic interventions to manage popular unrest (Boys & Walsh, 2020).

General key lessons from Megersa (2020: 2) include:

- Successful subsidy reforms in MENA countries (and elsewhere) were in general based on well-prepared plans, which were part of a broader fiscal consolidation strategy, and in some instances were backed by public communication campaigns.
- Periods of (financial) crisis offer a window of opportunity for subsidy reforms, with big reforms often occurring during a crisis in many case studies. Hence, this implies that international energy prices can be the key drivers of action and complacency in fuel subsidy reform in practice. "For importers in particular, high oil prices increase the need for reform, thus galvanising action, but also aggravate the political obstacles, thus prolonging inaction. On the other hand, low oil prices reduce political obstacles, making it easier to remove subsidies – but they also remove the fiscal urgency to do so" (Rentschler & Bazilian, 2017: 901).

- Improvements in social protection are critical to the success of reforms; governments have generally achieved overall savings, when shifting spending from broad-based consumer support programmes to better-targeted social programmes. This is supported through evidence from Nigeria by McCulloch, Moerenhout and Yang (2021: 1) who conclude that "building a social contract is key to [fuel subsidy] reform success".
- Building credibility is vital when strong interest groups resist subsidy reform; it is generally more difficult for governments to reform subsidies if these schemes bring more benefits to well-organised interest groups.

Much of the research and recommendations for successful energy subsidy reform that minimises instability revolve around the need to compensate losing groups through "hybrid" strategies (and enhancing social protection systems), accompanied by effective communication with the public, and implemented in a phased approach (Lockwood, 2015; Inchauste & Victor, 2017; Boys & Walsh, 2020: 4). Although, increased social nets for the poor are unlikely to reduce unrest if they do not address the politics underlying the original energy subsidies (Lockwood, 2015; Boys & Walsh, 2020: 4).

Box 2: Yemen's reform efforts

Yemen illustrates the case of domestic pricing reform efforts that have largely failed over several years. While these policies have been revised over time, in the ongoing conflict they have proven to be additionally destabilising. Yemen's fuel subsidies overwhelmingly benefited the country's urban upper and middle classes. Other issues include Yemen's severely deteriorating domestic security situation, deterioration in the country's finances, and domestic fuel shortages (further exacerbated by attacks on its oil and gas infrastructure).

Having had to import rising volumes of fuel products to cover shortfalls in domestic production, fiscal pressure on Yemen reached unprecedented levels; in an ill-prepared reform effort in July 2014, the country was forced (under intense pressure from lenders) to raise domestic energy prices. Amidst political turmoil, daily demonstrations in Sanaa and continued violent conflict between tribal groups and the central government, this decision was seen as a further failure by the state to provide for its citizens. Yemen's weak central state was subsequently unable to withstand pressure from non-state groups—notably the Houthis—for a swift reversal of initial reform efforts (Security Council, 2014 cited in El-Katiri & Fattouh, 2017). This underlines the difficulty of reforming energy pricing once a state has failed fiscally and politically and has lost its credibility, and its citizens' faith in its capabilities has collapsed.

Yemen's case also illustrates the enormous challenges that weak states face in implementing subsidy reform. With the complex interrelationship between energy subsidies and economic efficiency, and the difficulty of communicating the value of suffering short-term pain (removal of energy subsidies) versus the desirability of achieving long-term gain (economic growth) to their populations.

Source: El-Katiri & Fattouh (2017)

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About this report

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