

d.i.e

Deutsches Institut für
Entwicklungspolitik



German Development
Institute

Fossil-fuel Subsidy Reform

A Focus on Political Economy and the Policy Process

Case Study Prepared for the GIZ

Georgeta Vidican

German Development Institute, Bonn

3 September 2015

Table of contents

1.	The rationale for reforming fossil-fuel subsidy regimes.....	3
1.1.	The overall perspective.....	3
1.2.	The type and size of subsidies	5
2.	Political economy and policy process of fossil-fuel subsidy reform.....	6
2.1.	Political economy	7
	<i>Identifying critical junctures.....</i>	<i>8</i>
	<i>Mapping stakeholder interests and power.....</i>	<i>9</i>
2.2.	Policy process	13
	<i>Conducting extensive communication campaigns</i>	<i>13</i>
	<i>Building reform coalitions.....</i>	<i>14</i>
	<i>Identifying suitable options for compensating vulnerable population groups</i>	<i>16</i>
	<i>Phasing in reform and integrating systematic learning in the policy process</i>	<i>16</i>
3.	Lessons learnt and conclusions	18

1. The rationale for reforming fossil-fuel subsidy regimes¹

1.1. The overall perspective

Climate change concerns and the need to transition to more sustainable energy systems have triggered renewed attention to the ever increasing fossil-fuel subsidies. Worldwide subsidies to conventional fuels (measured on a pre-tax basis) reached 548 billion US\$ in 2013 (IEA 2014) and could exceed 600 billion US\$ by 2020 without policy reforms (IEA 2011).² When calculated on a post-tax basis, recent estimates show that fossil-fuel subsidies are much larger, amounting to US\$ 4.9 trillion in 2013 (6.5% of global Gross Domestic Product – GDP) (Coady et al. 2015). For some fossil-fuel products, such as coal, post-tax subsidies are substantial because prices do not reflect negative externalities (on environment and health) and energy products are taxed much less than others products. Most subsidies are used by emerging and developing countries³ but a large share is still consumed in developed economies. The advanced economies account for about 4% of the global total, topped by United States, China and Russia (IEA 2011). This share is much higher (about one fourth) when consider the post-tax subsidies (Coady et al. 2015). Here, the main reason why governments continue to subsidize fossil fuels is to protect energy industries and employment (UNEP 2003). This is particularly the case for coal mining subsidies in German, Japan, Spain, or for peat in Finland and Ireland (ibid). Such protectionist measures are, however, declining in importance. Therefore, high level of fossil-fuel subsidies is a global problem and reform is a pressing issue for all countries.

While the justification of sustaining subsidies is made on economic and social equity grounds, there is meagre evidence to support their continued use. By contrary, subsidies have been shown to have deep distortionary effects. By making conventional energy cheaper, subsidies create a lock-in into fossil-fuel based energy generation, distorting the market for renewable energy and energy efficiency. As an example of such distortions, budgetary support for renewable energy currently accounts for only one fourth of the subsidies to fossil-fuels, the same being true for investments in energy efficiency globally (GSI 2014).

Subsidies also place high burden on governments' budget, especially in developing countries, reducing fiscal space for other spending items (e.g. education, health, and infrastructure). Further, there is abundant evidence showing that subsidies benefit disproportionately the middle and upper-income groups, while the low-income groups receive only a small fraction of subsidies. On average, the richest 20% of households in low- and middle-income countries capture six times more in total fuel subsidies (43% of total subsidies) than the poorest 20% of households (7% of total subsidies) (Arze der Granado et al. 2012). By

¹ This study is based on my previous publications on the topic, namely Vidican (2014) and Vidican (2015 forthcoming), as well as on extensive literature on the topic.

² Existing estimates vary widely due to several factors related to the calculation approach (Coady et al. 2015).

³ Pre-tax fossil-fuel subsidies prevail in primarily in the Middle East and North Africa (MENA) (about 48% of global level) and emerging and developing Asia (over 20%) (IMF 2013: 13). About 13-18% of GDP is spent on post-tax subsidies in emerging and developing Asia, MENA and Pakistan, and the Commonwealth of Independent States (CIS) (Coady et al. 2015).

reducing the price of conventional energy (including electricity), subsidies also encourage overconsumption of such products, contributing to higher air pollution and environmental degradation⁴.

Therefore, a reduction of fossil-fuel subsidies could have profound effects not only on economic and social parameters, but also on pollution and health outcomes. As per Coady et al. (2015) eliminating post-tax subsidies in 2015 could raise government revenue by \$2.9 trillion (3.6% of global GDP). These savings from subsidy reform could then be targeted towards low-carbon development and supporting investment in health, education and infrastructure. For example, renewable energy targets until 2020 in the Middle East and North Africa (MENA) could cost up to \$200 billion, but this amount is less than one year's worth of fossil-fuel subsidies in the region, a total of \$237 billion (GSI 2014). Further, eliminating subsidies could cut global CO₂ emissions by more than 20% and reduce pre-mature air pollution deaths by more than half (Coady et al. 2015). Overall, these authors estimate that such action would result in an improvement of global economic welfare by \$1.8 trillion (2.2% of global GDP).

Although dozens of countries have started to reduce fossil-fuel subsidies in the past few years, the track record of reform remains, so far, unimpressive in spite of mounting evidence on negative effects at different levels. In fact, because of raising oil prices, global consumption subsidies more than doubled from 2009 to 2012 (Lang 2011). A recent study (IMF 2013a) synthesizes evidence from selected developing and emerging countries in different regions, showing mixed experiences from several reform episodes. While successful⁵ reform outcomes were found in only a few cases, in most countries governments were not able to sustain reform for a longer period of time, reverting initial actions by increasing subsidies under pressure from interest groups.

Experiences from different country contexts point to several challenges with reforming fossil-fuel subsidies, mostly related to politics and policy implementation. First, energy pricing is highly politicized and subsidies are rooted in a "*political logic that is often difficult to alter*" (Victor 2009), oftentimes being used as a legitimising mechanism for incumbent regimes. Therefore, finding ways to deal with the complex political economy of reform should be one of the main priorities for decision-makers. Second, reforming subsidies requires rapid, systematic, and carefully planned actions in order to avoid negative effects on vulnerable population groups and reduce opposition from interest groups. Third, sustaining reform requires deliberate actions to integrate systematic learning into the policy process, drawing from earlier national-level experiences with reform and from international experiences. In this process, exploring ways to build reform coalitions with diverse sets of stakeholders should be prioritized to overcome opposition to reform and respond to the needs of various interest groups.

This report discusses in more details these various challenges, with a particular focus on the political economy of reform and the policy process. In doing so, the author draws on various experiences with

⁴ The largest share of local air pollution and carbon dioxide emissions that contribute to global warming are a by-product of fossil-fuel combustion (Adly 2013). Harm on the environment can occur also many years after the end of a subsidy. For example, the United Kingdom has some 900 abandoned coal mines, from which 400 are leaking methane into the atmosphere that cannot be fully captured (IEEP 2007).

⁵ As discussed in the IMF report (2013a: 23), successful reform outcomes occur when countries implement reforms that lead to a permanent and sustained reduction of subsidies. Partial success is recorded in countries that achieved a reduction of subsidies for at least a year but where subsidies have re-emerged or remain a policy issue. Reform is considered to have failed where price increases or efforts to improve efficiency in the energy sector have been rolled back soon after reform began.

reform primarily from the developed and developing country contexts, where the reform of fossil-fuel subsidies is a pressing problem. However, before exploring these issues in more detail a short overview of the type and size of subsidies is provided.

1.2. The type and size of subsidies

While definitions of subsidies tend to be similar, it is the choice of benchmarks, assumptions for measurement, and the scope (e.g. external costs) that result in different estimates. Thus, agreeing on estimates— already difficult because data lacks transparency – becomes a complex undertaking. As there is no systematic reporting of energy subsidies at international level, it is essential that clear specifications are employed when energy subsidies are discussed in different contexts. At a general level, an energy subsidy is defined as:

‘any government action directed primarily at the energy sector that lowers the cost of energy production, raises the price received by energy producers or lowers the price paid by energy consumers’ (IEA 2010).

This definition underlines the price-gap approach to measuring subsidies, currently the method most commonly used due to the ease of calculation, in spite of its shortcomings due to important simplifications (Koplow, 2009). In this approach the observed domestic price of a good or a service is compared with a certain benchmark or reference price (i.e. the delivered price of comparable imported or exported products, or the cost of efficient market supply). However, as Fattouh and El-Katiri (2012) also emphasize, there is wide disagreement among international organizations on the choice of appropriate reference price. The international market price is generally taken as the benchmark, although it has several limitations, one being that it excludes producer subsidies (GSI 2012: 11). However, a joint report by the IEA, the Organization of the Petroleum Exporting Countries (OPEC), the Organisation for Economic Co-operation and Development (OECD) and the World Bank for the 2010 G-20 Summit in Toronto held that *“a commonly agreed definition of subsidies has proved a major challenge in the G-20 context and countries have decided to adopt their own definition of energy subsidies”* (IEA, OPEC, OECD, and World Bank 2011). A more detailed discussion of the strengths and weaknesses of different definitions of subsidies is given by the Global Subsidies Initiative (GSI) (2010).

This short paper will not repeat detailed information on the size of subsidies and their regional distribution (for detail see, for example, Coady et al. (2015), IMF (2013) and IEA statistics). It suffices to say that as a share from total pre-tax subsidies, most are to be found in the MENA countries, Eastern Developing Asia region, and Central and Eastern European countries and the Commonwealth of Independent States (CEE-CIS). On a post-tax basis the distribution looks different, with advanced economies and Eastern Developing Asia taking the largest share, along with MENA and CEE-CIS states. As for the breakdown of pre-tax subsidies by type of products and regions, MENA takes up most of subsidies on petroleum products, electricity and natural gas, while Eastern Developing Asia region spend most on coal subsidies.

Different types of fossil-fuel subsidies can be distinguished. The most basic typology of subsidies is based on who the beneficiaries are: consumers or producers of energy (see Table 1). The list of different instruments used to subsidize fossil-fuel is not exhaustive. As discussed in the joint report (IEA, OPEC,

OECD, and World Bank 2011: 3) in developed countries, the mechanisms used to support fossil-fuel production or use are difficult to identify and estimate. They can take the form of, for example, R&D support or tax reductions exemptions, which are not always easy to capture.

Table 1: A basic typology of fossil-fuel subsidies

Type of subsidy	Purpose	Main instruments
Consumer subsidy	Making energy affordable; stimulating energy consumption by individuals or industry	- Price controls that keep prices artificially low for direct use and for power generation inputs. - Indirect subsidies reflected in tax exemptions, preferential rates, other design features that differ from standard tax regime.
Producer subsidy	Promoting domestic exploration, extraction or refining; stimulating economic growth	- Support for producer prices (e.g. requiring utilities to buy coal at a price higher than the world price). - Low or zero import tariffs on imported crude petroleum. - Indirect subsidies through tax expenditure reflected in: favourable tax decisions for depletion of oil and gas fields in coal deposits; accelerated tax depreciation allowance for capital equipment; tax exemption for fossil-fuel producers' own energy use. - Investment in R&D. - Loan guarantees.

Source: In Vidican (2014) based on IEA, OPEC, OECD and World Bank (2010) and GSI (2012).

One reason for the lack and limited transparency of information on fossil-fuel subsidies is that governments themselves do not have full records on the range of support measures in place (Laan, 2010). In European countries subsidies take different forms. In France, for example, the government has focused its spending on nuclear facilities since the oil crisis of the 1970s, although oil and gas still account for almost half of energy use (OECD 2013). Support to specific fuels and categories of end users include taxes the form of partial or full exemptions or refunds on value added tax (VAT) or excise duties on oil products; grants for upgrading service stations in remote areas: research and development grants, etc. In Germany about 2 billion Euros are spent on subsidies to the coal industry, which actually represents a significant drop from 5 billion Euros in 1999. While subsidies to the coal industry are expected to be eliminated by 2018, among other types of support we can find tax exemptions, reductions, rebates, and (partial) refunds for particular fuels and sectors (especially for energy intensive industries and energy producing companies).

2. Political economy and policy process of fossil-fuel subsidy reform

In spite of their inefficiency, among the factors that lead governments to maintain fossil-fuel subsidies are equity and political legitimacy.⁶ From an equity perspective subsidies are aimed at alleviating poverty and supporting infant industries (as an industrial policy lever), by reducing the negative impacts from global fuel price fluctuations. Politically, subsidies legitimise regimes through redistribution of rents to special interest groups.

⁶ For a more extensive discussion of the factors that lead governments to maintain fossil-fuel subsidies see, for instance, Commander (2012).

Aside from the wide diversity of channels through which subsidies are distributed, one of the many difficulties faced by reform also relates to dense administrative channels. Specifically, energy subsidies are often administered by different ministries without comprehensive coordination and oversight (GSI 2012). In Morocco, for example, the administration of energy subsidies is split among several ministries, including the Ministry of Energy, Mining, Water and the Environment, the Ministry of Economy and Finance, the Ministry of the Interior and the Ministry of General Affairs and Governance (Vidican 2014). In addition, developing countries in particular have lower administrative capabilities to manage the process of data collection (Ellis 2010). Certainly, political economy factors also play an important role; governments that depend on the support of those who receive fossil-fuel subsidies have a disincentive to improve transparency, especially with respect to distributional effects; this would then suggest that increased transparency might not be desirable by those groups that benefit most from subsidies. Moreover, those seeking to block reform are often better informed and better organized than those seeking reform.

Thus, the persistence of subsidies over time resulted in them being deeply embedded in the social contract. As a result, enabling and pursuing the transition to sustainable energy systems is complex, requiring a systemic approach, transcending technical issues and incorporating political economy assessments. This analysis will be illustrated by country cases from different world regions.

2.1. Political economy

Reforming fossil-fuel subsidy regimes requires active interactions between stakeholders – civil society, the state, business sector, energy producers, and international actors/donors. These complex dynamics make it pertinent to understand the political economy of reform (i.e. the different stakeholders involved, their interests, power to influence reform, motivations). Where reforms have been implemented and considered successful the process has benefited when it was depoliticized, stakeholder coalitions formed, compensation schemes implemented, and extensive information campaigns carried out. Reforms fail mostly due to vested interest opposition, lack of public awareness, faulty implementation, or inability to form new change coalitions.

Aside from implementation, it should be stressed that an intervention such as the reform of fossil-fuel subsidies will not be effective if it satisfies only its own technical requirements. Rather, it must be adapted to the political realities in a specific national context. Achieving political consensus and enhancing the ability to manage and sustain the reform are critical if political capture by powerful beneficiaries is to be avoided. Stakeholder consultations are important as subsidies were initially introduced to benefit specific groups wielding political power and able to capture the rents associated with the goods they control through subsidies; thus, any policy reform can be blocked by these groups since they control the political process (UNEP 2003).

The reform of fossil-fuel subsidies is nowhere a new item on the agenda of policy makers. Even when subsidies take up a large share of a government budget, attempts to reform tend to have mixed result. Energy pricing is a highly politicized process. Typically, the main challenge resides in understanding the political process of initiating and sustaining the reform over a long period of time. Previous experiences illustrate that identifying the right time to introduce a subsidy and thereby increase energy process has long-lasting effects on the probability of success. Below I discuss two aspects found to be important in initiating reform: (i) identifying the right timing for reform (i.e. the critical juncture), such that

commitment for change can be mustered; (ii) mapping stakeholder interests and power so that a new narrative for reform can be framed in a way that is politically and socially accepted.

Identifying critical junctures

Critical junctures is a concept that derives from the historical institutionalism literature, used to assess institutional change. Critical junctures (or windows of opportunities for institutional change) are defined as brief phases of institutional flux in relatively long periods of path-dependent institutional stability. During critical junctures, there is a substantially heightened probability that agents' choices will affect the outcome of interest (Capoccia and Kelemen 2007). Critical junctures include major events, such as situations of political, financial, or economic crisis, in which "*structural (i.e. economic, cultural, ideological, organisational) influences on political action are significantly relaxed for a relatively short period of time*" (Hogan 2006: 657). Critical junctures are not the only source of changes, but they can prove to be critical in discrediting and bringing into question existing institutional arrangements and policies (Cortell and Peterson 1999; Haggard 1998).

The relevance of critical junctures for the reform of fossil-fuel subsidies is related to the following aspects. First, a subsidies reform implies a drastic change of policy that defines a long-standing social contract between the state and the society. Second, such a change (i.e. an increase in energy prices) can have dramatic implications on the society at large in terms of loss of welfare, lower competitiveness of the private sector, inflationary effects. For these reasons, the political risk associated with the reform tends to be high. Therefore, I argue that those interested in pursuing a transformational reform need to search for ways to increase the 'tensions' that lead up to the critical junctures, opening up windows of opportunity to reform.

In the case of fossil-fuel subsidy reform, critical junctures could be the result of, for example, internal (e.g. budgetary pressures, changes in political regimes) or external factors (e.g. increase or decrease in oil prices, economic crisis, loan conditionality imposed by donors). The trigger for reform does not necessarily have to be negative. In fact, drawing on the experience of Latin American and Caribbean countries, Di Bella et al. (2015) argue that reducing subsidies during a recession could trigger resistance and exacerbate the economic downturn. Subsidy reform in Argentina provides evidence for this case (see Di Bella et al. 2015: 37). Rather, situations of economic progress could open up venues for reform, as the population at large could better internalize the negative effects from increasing energy prices. The sudden unexpected drop in fossil-fuel prices in late 2014, for example, has led several authors to argue for the removal of fuel subsidies and/or the introduction of carbon taxes (see, for instance, Coady et al. 2015).

Yet, large external and fiscal deficits and rising public debt often create opportunities for reform, as the case in Poland and in the Czech Republic, for example. In Egypt, the budget deficit also became increasingly unsustainable in recent years. According to the International Energy Agency (IEA) (2014), energy subsidies reached 10.2% of GDP in 2012 in Egypt, one of the highest levels worldwide. This is despite the fact that since 1977, Egyptian governments have made repeated attempts to reduce subsidies. When it became clear that Egypt was about to face a major fiscal crisis and there was change in political regime, authorities announced major measures that would result in an increase in energy prices for both businesses and household consumers (Bridle et al. 2014). While it is still too early to assess how successful this reform has been, evidence points to promising results and an unprecedented scale of change. Jordan is another case where internal and external crisis have created a window of opportunity for

taking action on reducing subsidies. Most of Jordan's energy needs are met by importing natural gas and oil (Electricity Regulatory Commission 2012). The government began to make it clear that existing subsidies would place significant pressure on Jordan's fiscal sustainability – especially as population increased and economic growth continued. The opportunity to reform subsidies emerged in 2010 when there was a major disruption to the Arab Gas Pipeline that forced a reduction in imports of natural gas, which further increased oil imports (Bridle et al. 2014). Increasing fiscal pressure resulted; in response the Jordanian authorities increased electricity tariffs and removed the remaining subsidies on oil prices, stressing the importance of energy security to national development (ibid.).

Examples of critical junctures initiated by positive events/circumstances can also be identified. For example, Turkey started to liberalize its energy pricing system at the time it introduced economy-wide reforms in expectation of entering the European Union in the early 1990s (IMF 2013). Its improving economic conditions led to little opposition to reforms and limited negative effects on vulnerable consumer groups.

These examples suggest that the timing of increasing energy prices is an important element to consider when planning to reduce fossil-fuel subsidies. Identifying such circumstances (such as economic expansion, low international prices, or opportune moments before subsidy levels are so large so as to threaten fiscal sustainability) and taking advantage of them is an important step. Preparatory steps must be accompanied by a thorough assessment of the size and socio-economic impacts of reforming subsidies and extensive communication campaigns to the public at large.

Mapping stakeholder interests and power

Changes to the fossil-fuel subsidy regime tend to be highly political. Interest groups that demand subsidies tend to be well organized and investments solidify around the existence of the subsidy, making change difficult (Victor 2009). As a result, governments tend to let vested interests prevail and thus be “*unwilling, unable and afraid of implementing reforms*” (Blatter and Buzzell 2015). An increase in energy prices leads to withdrawing rents from powerful groups in the society (e.g. middle and upper class, energy intensive industries or businesses in general) and increase vulnerabilities of large low-income population groups.

Therefore, understanding the constellation of interests and power among different stakeholders and the rationale behind their interests is critical in working out how to present arguments for reform. This aspect can often prove to be more important than political will and leadership. In particular, it is critical to map out the structures and nature of considerations that shape the interests of each stakeholder group (Moore 2011). Aside from a clear understanding of interests and power relations, developing state capacity and familiarity with each stakeholder groups is critical so that those involved in the reform process can begin the process of reorienting stakeholder interests and building trust. Trust building is important as earlier failed attempts to reform subsidies (a highly common circumstance in most developing and emerging countries) can undermine future success. Lack of a comprehensive and transparent reform strategy able to communicate the rationale for reform and to develop a roadmap for mitigating negative effects for various groups, can result in high levels of opposition.

As a general rule, the population at large is an important source of opposition to fuel subsidy reform. In the case of low-income groups, subsidies can be seen as an essential form of welfare support, even though the majority of benefits may go to middle and upper income groups. As the experience of various

countries shows (e.g. Indonesia, Egypt, Tunisia), removing this financial support oftentimes resulted in mass protests and destabilising existing regimes. Hence, while economically low income households tend to have limited power, as a collective entity they can exert strong influence on policy actions which can then be quietly supported by middle and upper income households.

The business sector can also be an important source of opposition, as increases in energy prices are likely to be seen as a threat to the competitiveness of firms. However, as Blatter and Buzzell (2013) argue, the business sector typically finds it difficult to develop a coherent position as many low-energy industries understand that the removal of subsidies can be used to free up the capital they need for investment. Wise policy reformers can take full advantage of this argument. In Tunisia, for example, such fragmentation of opinions and weakening of business associations led to a realisation that the business sector was actually not strongly opposed to subsidy reform (Blatter and Buzzell 2013).

Trade unions, which by their nature seek to protect the interests of the workers, are generally opposed to the removal of fossil-fuel subsidies due to the negative effects these reforms tend to have on consumers. However, it remains unclear as to whether trade unions are generally powerful enough to impede reform. Drawing again on the experience of Tunisia, the unions appear to be more willing to support reform if they are included in the debate and the government adopts a transparent approach to the reform.

Certainly, the government is the most relevant stakeholder in most transformational policy reform processes. To enact reform, the government must have the political will needed to tackle the complex subsidy system. Strong political capital is also necessary to develop the case and minimise political opposition as a reform is implemented. Lack of political will from within the government can be due to ideological reasons, corruption, fear of losing legitimacy, or weak administrative capacity to enact a complex reform. Government is not a monolithic actor. Rather, tensions and conflicting interests prevail within the government structure. For example, the Ministry of Finance might try to push forward reform for reasons of fiscal sustainability, which the Ministry of Interior might try to block it for political stability concerns, as was the case in Morocco, which, prior to 2014, ultimately resulted in the abandonment of an attempt to reduce subsidies (Vidican 2014).

The constellation of interests and power is highly context specific. Therefore, while the above description of interests can apply more generally, strong variations can be observed from place to place. Each country is faced with specific political, economic and social framework conditions, which will result in more or less unique conditions. Therefore, when planning a reform, thorough political analysis is necessary. Careful mapping of all the factors that support or obstruct reform are worthy of early consideration by researchers as well as those who aspire to implement a proposed reform. Table 2 shows an example of how such mapping can be done, at different levels of aggregation. The important aspect here is the need to account for the different views, the logic/rationale supporting these views and the factors that could lead to a reverse the initial reaction to reform.

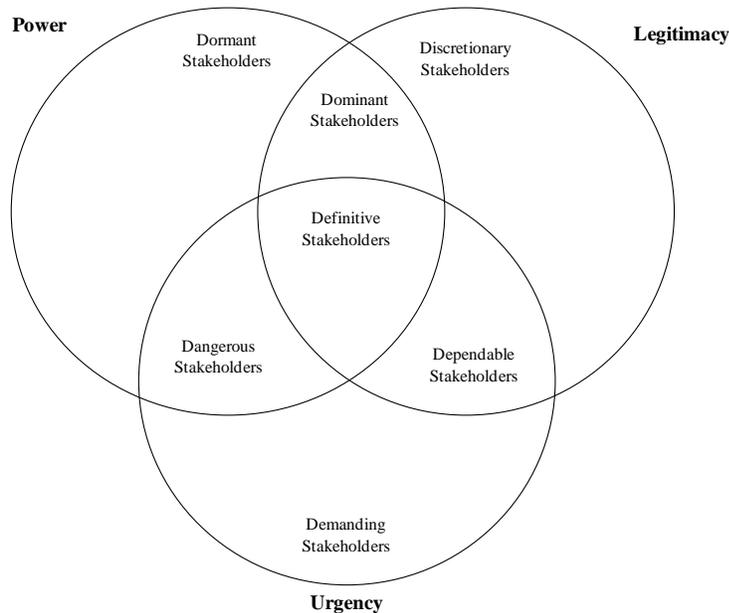
Table 2: Mapping stakeholders and their views on subsidy reform

	View on the fossil fuel subsidy reform			Rationale	Factors that could reverse initial reaction to reform
	Support	Oppose	Ambivalent		
Government entity 1					
Government entity 2					
Government entity ...					
Political parties					
High energy-intensive firms					
Low-energy intensive firms					
Small and medium enterprises					
Other type of firms					
Business associations					
....					

Source: Vidican and Johnson (2014)

From other perspective, Mitchell et al. (1997) provide a useful classification scheme that can be used to assess likely stakeholders responses to an energy subsidy reform process. According to this scheme there are three key attributes that a stakeholder (in relation to a focal organisation) can possess: power, legitimacy, and urgency. The identification of the focal organisation (the stakeholder driving reform) is important. In the case of subsidy reform the focal organisation may be the Ministry of Finance or the Ministry of Energy. Mitchell et al. group stakeholders into seven categories: definitive stakeholders, dangerous, dependable, dormant, discretionary, and demanding stakeholders (see Figure 1).

Figure 1: Stakeholder identification and salience based on three attributes



Source: Mitchell et al. (1997)

While this classification is useful, it does not clarify the specific view that each stakeholder has on the reform of subsidies. Hence, focus groups and consultative analysis are needed to understand the specific position that each actor has towards reform (support, opposition, ambivalence), the rationale for their position and the factors that might contribute to a change in their initial position, as Table 2 illustrates. Such an in-depth assessment can help to identify how incentives may be re-oriented towards supporting certain reform outcomes. In Brazil, for example, a gradual approach to reform was adopted, tailored to the specific interests and power of various stakeholders. Careful attention was then paid to sequence reforms in a politically acceptable manner. Specifically, the first fossil-fuel products to lose subsidies were those associated with politically weak stakeholders (asphalt, lubricants, gasoline for airplanes), while politically more difficult subsidies for liquid fuels used for transport and by local industry were removed last (IMF 2013).

While such assessments of interests and power might take place on a haphazard basis during the preparation for reform, there is limited evidence in the literature for a systematic approach to map interests and power of different stakeholders. Yet, given the complex politics surrounding the reform, such an assessment can help decision makers to identify potential alliances for reform and seek alternative strategic interventions to satisfy interest groups.

2.2. Policy process

Recognizing that the main challenge to achieving an effective and sustainable reform of fossil-fuel subsidies relates to the policy process, in this section I discuss several aspects considered important:

- conducting extensive communication campaigns;
- building reform coalitions;
- identifying suitable options for compensating vulnerable population groups;
- phasing in reform and integrating systematic learning in the policy process;

Most of these aspects have been widely discussed in the literature, reason why here I will only emphasise the most relevant aspects as they relate to the policy process.

Conducting extensive communication campaigns

Efforts to diffuse opposition to a reform can be as important as developing the case for it. To reduce opposition, extensive communication campaigns and elaborating proposed mitigation measures are necessary. Time and again, this aspect has been singled out as critical for ensuring success regardless of the framework conditions of the country engaging in reform.

Communication about the need to reform (the costs incurred by different stakeholders and the society as a whole), the benefits from reducing subsidies, and the proposed measures for mitigating negative impacts from higher energy prices needs to reach a wide audience. Based on the experience of various countries, Table 3 illustrates various communication messages about fossil-fuel subsidy reform, which have proved to be effective (GSI 2013).

Table 3: Communication messages about fossil-fuel subsidy reform

	Raise awareness of subsidy problems	Neutralize opposition	Raise awareness of gains from reform	Raise awareness of reform plans
Example focus of messages	Costs, inefficiencies, comparison with other countries, impacts on the poor and the environment.	Identifying smuggling and corruption, countering misconceptions.	Savings, target aid to the poor, more social spending, better standard of living.	Explaining reforms and mitigation, showing relevance to stakeholder needs, noting successes.

Source: GSI (2013)

Active communication and transparency in decision-making is needed throughout the entire reform process, from the very beginning until the ultimate goal is achieved. In Tanzania, for example, a specialized regulatory agency was established to keep the public informed about the price structure of fuel products (Kojima 2009). A similar effort to increase transparency of energy pricing to ensure continuity of reform has been used in South Africa (IMF 2014).

The literature abounds with examples of how communication can enable or constrain reform. In 2005, for instance, Ghana performed a Poverty and Social Impact Analysis (PSIA) that showed how the rich benefited disproportionately from energy subsidies and quantified the likely impact of reform on the poor

(Laan et al. 2010). The results of the PSIA were made public and discussed in a dialogue with various stakeholders, including trade unions (ibid.). The government then engaged in widespread communications campaign, including public addresses by the President and the Minister of Finance, explaining how resources freed from subsidizing energy products would partly be reallocated to social priorities (IMF 2013; Laan et al. 2010).

In India, a study showing that 40% of subsidized kerosene was diverted to the black market and did not reach the intended recipients contributed to the government taking action on reforming subsidies (Shenoy 2010). On the other hand, in Nigeria, the absence of good quantitative information on the state of the refining industry and the subsidy mechanism itself precluded a transparent discussion on reform in 2011 (IMF 2014). The National Assembly voted against the removal of petrol subsidy, claiming a lack of solid data underpinning the size and incidence of subsidies (Ogbu 2012).

Another illustrative example comes from Iran, which has one of the highest levels of fossil-fuel subsidies worldwide. In the past, this country had experienced large opposition to increasing energy prices. In 2010, however, Iran implemented an ambitious subsidy reform program after nearly three years of negotiation. The specific plan for reform to search for a way forward was announced by the President of Iran in 2008 and enacted into law in 2010. During the development phase, extensive communication campaigns were used to inform the public about the cost of subsidies and their unequal distributive effects in a manner that enabled the government to minimize social unrest. At the same time, several months before the program was to go into effect, households were asked to open a bank account and document the number of their members, so that compensation payments could be disbursed on the day energy prices would be increased (Salefi-Isfahani 2014). Even if the reform process suffered from other shortcomings, the communication process, in its early stages, proved to be effective in increasing trust in the government authorities.

Building reform coalitions

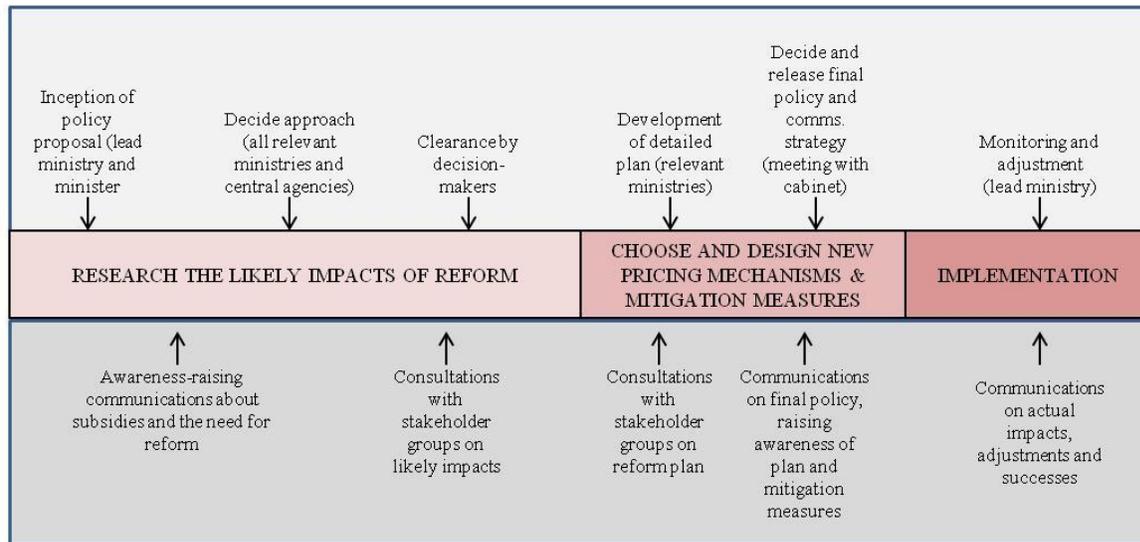
Drawing on past experiences with fossil-fuel subsidy reform, two key factors appear to obstruct reform (Vidican 2015 forthcoming). The first is lack of a collective process that encourages reflection on and negotiation towards reform packages that are both politically and socially acceptable. The second is a lack of a compelling narrative that resonates with various stakeholders involved with (and affected by) the reform.

In many cases, one of the key barriers is the prior framing of the problem and governance process that have resulted from specific stakeholder constellations that have become mutually supportive and interlocked. In the most challenging cases, these constellations are deeply embedded in the existing social contract. To overcome this lock-in, a collective process is needed to address alternative pathways (Vidican 2015 forthcoming). The search needs to be for a new a narrative that articulates a different perspective and enables the negotiation involving different stakeholder groupings which, in some cases, need to be formed.

For new coalitions to be formed, and more importantly for them to enable and sustain a process of change, several factors are important (ibid.). First, a clear understanding of interests and power relations (as discussed before) is necessary so that ways around a political bottleneck can be found. Second, state capacity needs to be developed so that the processes that draw attention to these new interest groups (coalitions) can be established. Thirdly, these processes can then be used to reorient interests towards the reform goal, develop understanding of the case for a reform and build trust. Extensive information and

communication campaigns are necessary not only to justify the need for reform but also to ensure transparency of the reform process, as discussed earlier. Building transformative alliances depends strongly on all these three factors. Figure 2 illustrates strategic interventions necessary to build internal and external support for reform, where these three main factors play an important role.

Figure 2: Model policy cycle showing strategic points for internal and external support building



Source: Based on GSI (2013: 7)

Peiffer (2012) offers a comprehensive review of the literature on reform coalitions, defined as

“a (formal and informal) political mechanism and process utilized and formed by state and business actors, initiated by either, which enables them to work cooperatively to address specific state and market collective action problems through institutional and policy reform in pursuit of a specific reform agenda.”

Such alliances need to include a broad set of actors (state, business, academia, and civil society) with different interests and motivations. This diversity is important as *“the change of effective cooperation increases dramatically if players with different motivations are brought into the picture”* (Johnson et al. 2014). Yet, alliances between stakeholders with heterogeneous interests are more difficult to achieve. To address this challenge, the analysis of stakeholders’ interests and power is critical, pointing to the role that dominant and/or definitive stakeholders can play in bridging between different interests to enable the formation of an alliance for reform (as discussed in Section 2.1).

In the process of building transformative alliances the realistic goal should not be to achieve full consensus. Rather, the goal should be to find a narrative that allows the interests of different stakeholders to converge and to negotiate win-win policy interventions.

In the case of fossil-fuel subsidies, the state is the critical driving force for reform, as subsidies place a high burden on the government budget, legitimise incumbent elites and offer benefits to various societal groups. Thus, bargaining between the state and societal actors can be used to stimulate collective action, aggregate and channel demands, identify common interests, build consensus and ultimately allow political

leaders to be seen to respond appropriately by proposing and implementing a transformational reform (Moore 2010: 10).

A recent IMF (2013b) report assessing lessons learned from the reform of fossil-fuel subsidies stresses that close consultation with stakeholders, including inviting them to participate in the formulation of a subsidy reform strategy can contribute to building consensus for reform. For example, in mid-2007 the federal government of Germany, the governments of the states with coal mines, the unions and the RAG Deutsche Steinkohle AG (the company which carries out all production of hard coal) agreed on a detailed roadmap to end all coal subsidies in a socially acceptable manner by the end of 2018 (OECD 2013). Continuous dialogue between these stakeholders with different interests is necessary to ensure that reform can be carried out. Currently, however, in light of continuous pushback from the coal industry, it is not clear whether subsidies will be phased out completely by 2018. This suggests that setting up these coalitions is not sufficient; rather, maintaining them, nurturing the relationships between the stakeholders, and constantly adapting the narrative and the objectives to changing framework conditions is critical.

Another case is Namibia, where in 1996 the National Energy Council established the National Deregulation task force to examine options for fuel price deregulation that required a consultative process involving all stakeholders. This resulted first in the 1998 White Paper which stressed the importance of issues such as keeping subsidies to remote areas, transparency and gradual deregulation (Namibia's Ministry of Mines and Energy, in IMF 2013b). These provisions were a key to securing widespread support for the reform (IMF 2013b). In Niger, the authorities opted for a similar approach. They set up the "Comite du Differe" in 2010 to discuss ways to advance fuel subsidy reform. This Committee's role was to ensure that all relevant stakeholders were on board and forged a consensus on the main elements of reform (IMF 2013b). These experiences and others suggest that gradual development of the case for reform is critical. Sufficient time needs to be set aside to do this. In the case of Niger it took six months to ensure that all stakeholders were on board and agreed with the main elements of reform (IMF 2013a: 46).

Identifying suitable options for compensating vulnerable population groups

The reform of fossil-fuel subsidies generates both winners and losers. Its success also depends on how well government authorities address the negative impacts from reform. The literature abounds with assessments of what types of compensation schemes are most effective in various contexts, reason why here it suffices to say that they are critical for the reform process. Compensation schemes in the form of cash transfers can be targeted or universal. The choice between the two depends on various factors, among which the level of knowledge regarding who the vulnerable groups are and how large the compensation packages should be for different types of consumers (i.e. fiscal and administrative capacity). These two compensation approaches have advantages and disadvantages. Compared to universal cash transfers, targeted transfers financial benefits directly to the groups that are most affected from increases in energy prices. Yet, the effectiveness of this option depends on governments' administrative capacity to identify the true beneficiaries in order to respond completely to the needs of the most vulnerable groups.

Phasing in reform and integrating systematic learning in the policy process

Ensuring the durability of reform is a challenging process. Various countries that seemed on the way to successful reform reverted back to the use of subsidies to achieve social objectives when oil prices increased on the international market. Examples of such decisions can be recently found in Jordan, in

Ghana and in the Indonesia. Two additional factors contribute to ensuring an effective process of reform: the phasing in of reform and the integration of learning effects in the policy process.

The pace and sequencing of reform reflect the capacity of governments to enable transformative reforms and protect the vulnerable groups. A thorough assessment of benefits and costs, extensive communication, identifying stakeholders and building coalitions should all be carefully phased in the reform process. At the same time, a gradual rather than a large increase in energy prices is preferred (IMF 2013; GSI 2014).

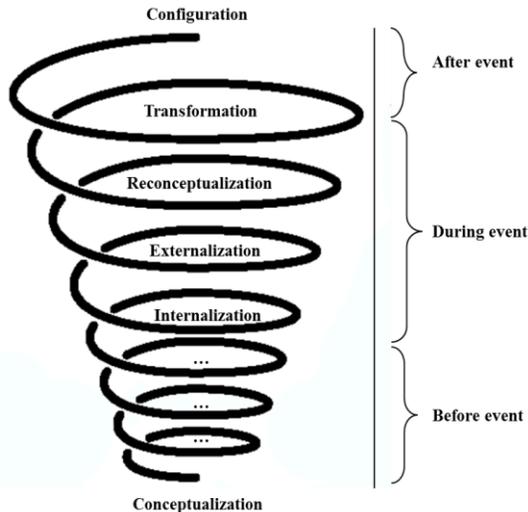
Successful policy-reform involves systematic learning (Vidican 2014). The mixed experience with fossil-fuel reforms worldwide and the heavy dependence of reform on the specific political circumstances suggest that learning should be at the centre of the policy-making process. Beaton et al. (2013) stress that governments often use “*one another’s innovations*” with subsidy reform. To this end, several elements are important (Vidican 2014). First, building on international experience to find country-specific pathways for reform can provide insights relevant to the customization of reform to national framework conditions. For instance, targeted compensation measures might be an effective mitigation strategy in some countries, but might not be effective in others, either due to administrative hurdles or because of political opposition. Second, experimenting with alternatives and making choices is also important. Iran’s experience with the reform of subsidies in 2010 illustrates this point. Initially the government sought to identify target groups for compensation measures. However, when the government encountered administrative difficulties with implementation it immediately switched to universal cash transfers (Hassanhadeh 2012). This rapid switch to a policy alternative suggests that experimentation and learning occurred and enables future inefficiencies to be avoided. In the process of doing this, Iran also reshaped its narrative (Vidican 2014). Iran’s experience also suggests that policy learning should be a continuous ongoing rather than a once-off process. In its effort to redistribute income, the government set the level of cash transfers well above new revenues from the price increases and printed money to pay the deficit. The resulting inflation eroded public support for the program and caused the parliament to freeze further price adjustments (Salefi-Isfahani 2014). Therefore, what appeared to be successful reform initially, turned out to be ineffective, mainly because the government failed to consider the long-term effects of its policy interventions.

A third element needed to support systematic policy learning is willingness to reconsider overall policy objectives. Evaluating the progress of reform is also important, as are phase-out strategies for compensation schemes and the replacement of cash handouts with in-kind mitigation measures as the negative impact of subsidy removal diminishes. Further, to ensure durability of reform it is important that policy makers continue consulting and communicating even when the automatic fuel pricing mechanism is operational.

What earlier experiences show is that systematic policy learning must occur across two dimensions: learning from others and as well as learning over time. In addition, cycles of learning should be integrated in the policy making process, where reviews and revisions of goals and achievements are regularly made (Lütkenhorst et al. 2014). The World Bank’s ‘learning spiral’ (see Figure 3) is one of the most compelling approaches to integrate learning in the policy making process (Blindenbacher 2010). Such an approach can be highly relevant when a complex policy reform is being considered. At its core there is a need for an iterative process that searches for feedback loops, allows the integration of new knowledge and ensures adaptation to the responses that the reform induces. To this end, ‘learning brokers’ can be used to

moderate the interactive learning process and facilitate dissemination of new knowledge and ongoing reform (Lütkenhorst et al. 2014).

Figure 3: The learning spiral concept



Source: Own design based on Blindenbacher (2010)

3. Lessons learnt and conclusions

Drawing on extensive literature on fossil-fuel subsidy reform, this report focuses on six key lessons learned that could assist decision-makers in preparing and implementing a reform program that is politically accepted by different stakeholder groups and which can be sustained over a long period of time. These key lessons take into consideration both the complex political economy context that defines the reform of fossil-fuel subsidies as well as the policy process that should accompany a successful reform. Ultimately, they could offer policy-makers guidelines for enabling the reform of fossil-fuel subsidies and for sustaining reform in the face of internal and external pressures.

- *Identifying critical junctures*
Starting reform at the opportune moment in time, when support for removing subsidies can be garnered from powerful stakeholders is crucial. Such critical junctures (or windows of opportunity) can be found either in situations or economic or financial crisis or in conditions of economic prosperity.
- *Mapping stakeholder interests and power*
Understanding the constellation of interests and power among different stakeholders and the rationale behind their interests is critical in working out how to present arguments to reform. This aspect can often prove to be more important than political will and leadership. Such an assessment can help decision makers to identify potential alliances for reform and seek alternative strategic interventions to satisfy interest groups.

- *Conducting extensive communication campaigns*
Efforts to diffuse opposition to a reform can be as important as developing the case for it. For this reason, extensive communication campaigns on the need to reduce subsidies, the benefits and costs of the subsidy scheme, the winners and losers from reform, and measures for compensating vulnerable groups are critical for the success of reform. Communication and higher transparency should be emphasized for the entire duration of the reform process, the effects of which also translate in higher trust levels in governments' administrative capacity.
- *Building reform coalitions*
Reform coalitions among stakeholders with diverging interests should be at the core of the policy process. Vested interests and the embeddedness of the subsidy scheme in the social contract make reform difficult without processes to align interests and develop a narrative that highlights the societal benefit from reform. To this end, forming and maintaining such coalitions.
- *Identifying suitable options for compensating vulnerable population groups*
Compensation schemes for vulnerable groups are essential to the success of subsidy reform. The form in which such schemes are rolled out should be carefully assessed and should be customized to the specific country-level conditions.
- *Phasing in reform and integrating systematic learning in the policy process*
Ensuring the durability of reform is a challenging process. Along with all other key lessons, phasing in reform and integrating systematic learning in the policy process contribute to this ultimate objective. The pace and sequencing of reform reflect the capacity of governments to enable transformative reforms and protect the vulnerable groups. Systematic learning from other countries and from earlier attempts can contribute to reducing backlash to reform later on, and to achieving a fair and financially sustainable reform process.

References

- Adly, J. (2013). Designing Energy and Environmental Fiscal Instruments to Improve Public Health. Global Health Working Papers. Retrieved from: <http://globalhealth2035.org/sites/default/files/working-papers/designing-energy-environmental-fiscal-instruments.pdf>
- Arze del Granado, J., Coady, D., and R. Gillingham (2012). “The Unequal Benefits of Fuel Subsidies: A Review of Evidence for Developing Countries.” *World Development*, Vol. 40: 2234-48, December.
- Beaton, C., Gerasimchuk, I., Laan, T., Lang, K., Vis-Dunbar, D., and Wooders, P. (2013) *A guidebook to fossil-fuel subsidy reform for policy-makers in Southeast Asia*, Geneva: Global Subsidies Initiative (GSI) of the International Institute for Sustainable Development, September 2012.
- Blatter, D. and Z. Buzzell (2013). “The Subsidy Trap: Why Tunisia’s Leaders are Unwilling, Unable, or Afraid to Abandon Fuel Subsidies.” IMES Capstone Paper Series, The Institute for Middle East Studies (IMES), The Elliot School of International Affairs, The George Washington University.
- Blindenbacher, R. (2010). “The Black Box of Governmental Learning: The Learning Spiral – A Concept to Organize Learning in Government. The World Bank, Washington DC.
- Bridle, R., Kiston, L., and P. Wooders (2014). Fossil-Fuel Subsidies: A Barrier to Renewable Energy in Five Middle East and North African Countries. GSI Report, September. Global Subsidies Initiative (GSI), International Institute for Sustainable Development. Geneva.
- Commander, S. (2012). A Guide to the Political Economy of Reforming Energy Subsidies. IZA Policy Paper No. 52. Institute for the Study of Labor, Bonn.
- Capoccia, G. and R. D. Kelemen (2007). “The Study of Critical Junctures: Theory, Narrative, and Counterfactuals in Historical Institutionalism.” *World Politics* 59, April, pp. 341-69.
- Coadu, D., I. Perry, L. Sears, and B. Shang (2015). How Large are Global Energy Subsidies? IMF Working Paper, WP/15/105. International Monetary Fund, Washington D.C.
- Cortell, A. P. and S. Peterson (1999). “Altered States: Explaining Domestic Institutional Change.” *British Journal of Political Science*, 29: 177-203.
- Di Bella, G., L. Norton, J. Ntamungino, S. Ogawa, I. Samake and M. Santoro (2015). Energy Subsidies in Latin America and the Caribbean: Stocktaking and Policy Challenges.” IMF Working Paper, 15/30, International Monetary Fund, Washington D.C.
- Electricity Regulatory Commission (2012). “Jordan Renewable Energy Program.” Retrieved from: <http://www.naruc.org/International/Documents/QADOUS-%20Jordan%29RE%20Program%20Sept%202012.pdf>
- GSI (2013). “A Guidebook to Fossil-Fuel Subsidy Reform for Policy-Makers in Southeast Asia: Executive Summary”. Global Subsidies Initiative (GSI), International Institute for Sustainable Development, Geneva.

- GSI (2014). “Paying the Polluter: How Fossil Fuel Subsidies Hold Us Back from a Low-Carbon Future”. Retrieved from: http://www.iisd.org/gsi/sites/default/files/FFSR_and_climate_infographic_snd10-12_0.jpg
- G20 Leaders’ Statement – The Pittsburgh Summit (Sept. 24-25, 2009). Retrieved from: http://www.treasury.gov/resource-center/international/g7-g20/Documents/pittsburgh_summit_leaders_statement_250909.pdf
- Haggard, S. (1998). “The Institutional Foundations of Hegemony: Explaining the Reciprocal Trade Agreements Act of 1943.” *International Organization*, 42(1): 91-119.
- Hassanzadeh, E. (2012) ‘Recent developments in Iran’s energy subsidy reforms’, *Policy Brief*, October 2012, Geneva: Global Subsidies Initiative (GSI), International Institute for Sustainable Development.
- Hogan, J. W. (2006). “Remoulding the Critical Junctures Approach.” *Canadian Journal of Political Science* 39(3): 657-679.
- IEA, OECD, OPEC and World Bank (2011). “Joint Report by IEA, OPEC, OECD and World Bank on Fossil-Fuel and other Energy Subsidies: An Update of the G20 Pittsburgh and Toronto Commitments.” Prepared for the G20 meeting of Finance Ministers and Central Bank Governors and the G20 Summit. Retrieved from: <http://www.oecd.org/env/49090716.pdf>
- IEA (2014). “Fossil-fuel Consumption Subsidy Rates as a Proportion of the Full Cost of Supply.” International Energy Agency (IEA). Retrieved from: <http://www.iea.org/subsidy/index.html>
- IMF (2013a). “Case Studies on Energy Subsidy Reform: Lessons and Implications.” International Monetary Fund (IMF), January 28. Washington DC.
- IMF (2013b). Morocco: Selected Issues, IMF Country Report No. 13/110. International Monetary Fund (IMF), Washington DC. Retrieved from: <http://www.imf.org/external/pubs/ft/scr/2013/cr13110.pdf>
- IMF (2014). “Energy Subsidy Reform: Lessons and Implications.” Edited by B. Clemens, D. Coady, S. Fabrizio, S. Gupta, T. Alleyne, C. Sdravovich. International Monetary Fund (IMF), Washington DC.
- Johnson, O., Altenburg, T. and H. Schmitz (2014). “Rent Management Capabilities for the Green Transformation.” In A. Pegels (Ed.), *Green Industrial Policy in Emerging Countries*. Chapter 2. Routledge.
- Kojima, M. (2009). “Government Response to Oil Price Volatility: Experience of 49 Developing Countries.” *Extractive Industries for Development Series No. 10*. The World Bank, Washington DC.
- Laan, T., Beaton, C., and B. Presta (2010). “Untold Billions: Strategies for Reforming Fossil-Fuel Subsidies: Practical Lessons from Ghana, France and Senegal,” The Global Subsidies Initiative. Geneva: International Institute for Sustainable Development.
- Lang, K. (2011). “The Global Subsidies Initiative, The First Year of the G-20 Commitment on Fossil-Fuel Subsidies: A commentary on lessons learned and the path forward.” The Global Subsidies Initiative, International Institute for Sustainable Development (IISD), Geneva, January. Retrieved from: http://www.iisd.org/gsi/sites/default/files/ffs_g20_firstyear.pdf

Lütkenhorst, W., Altenburg, T., Pegels, A. and G. Vidican (2014). “Green Industrial Policy: Managing Transformation under Uncertainty.” DIE Discussion Paper 28/2014. German Development Institute / Deutsches Institut für Entwicklungspolitik, Bonn.

Mitchell, R. K., Agle, B. R., and D.J. Wood (1977). “Toward a Theory of Stakeholder Identification and Salience: Defining the Principle of Who and What Really Counts.” *Academy of Management Review*, 22(4): 853-886.

Moore, M. (2011). “The Governance Agenda in Long Term Perspective: Globalization, Revenues and the Differentiation of States. Working Paper Series 378. Institute of Development Studies, Sussex.

OECD (2013). “Inventory of Estimated Budgetary Support and Tax Expenditures for Fossil Fuels 2013.” Organisation for Economic Development and Cooperation (OECD). OECD Publishing.

Ogbu, O. (2012). *The Removal of Oil Price Subsidy in Nigeria: Lessons in Leadership and Policymaking in a Trust-Deficit Environment*. Brookings Institute. Opinion, January 26.

Peiffer, C. (2012). “Reform Coalitions: Patterns and Hypotheses from a Survey of Literature.” Concept Paper 03, Developmental Leadership Program, Policy and Practice for Developmental Leaders, Elites and Coalitions.

Pierson, P. (2004). “Politics in Time: History, Institutions, and Social Analysis.” Princeton University Press, Princeton NJ.

Salefi-Isfahani, D. (2014). *Iran’s Subsidy Reform: From Promise to Disappointment*. Policy Perspective No. 13. Economic Research Forum, Cairo.

Shenoy, B. (2010). “Lessons Learned from Attempts to Reform India’s Kerosene Subsidy.” The Global Subsidy Initiative. Geneva: International Institute for Sustainable Development.

Skocpol, T. (1985). “Bringing the State Back in: Strategies of Analysis in Current Research.” In Evans, P.B., Rueschemayer, D., and Skocpol, T. (Eds.), *Bringing the State Back in*. Cambridge University Press.

UNEP (2003). “Energy Subsidies: Lessons Learned in Assessing their Impact and Designing Policy Reforms.” United Nations Energy Program (UNEP), Geneva.

Victor, D. (2009). “The Politics of Fossil-Fuel Subsidies”. Global Subsidies Initiative (GSI), International Institute for Sustainable Development, Geneva.

Vidican, G. (2014). “Reforming Fossil-fuel Subsidy Regimes in the Middle East and North African Countries.” In A. Pegels (Ed.), *Green Industrial Policy in Emerging Countries*. Chapter 7. Routledge.

Vidican, G. (2015 forthcoming). “Lessons from the Reform of Fossil-Fuel Subsidies.” In M. Young (Ed.) *Dynamics of Transformational Environmental Policy*. Earthscan.

Vidican, G. and Johnson, O. (2013). “Sustainable and Inclusive Energy Transitions: Negotiating Knowledge, Politics and Policy. Paper presented at the PEGNet Conference, Copenhagen, October 17-18.