NOTA DI LAVORO

4.2017

The Social Contract in the MENA Region and the Energy Sector Reforms

Sara Brzuszkiewicz, Fondazione Eni Enrico Mattei

Energy Scenarios and Policy
Series Editor: Manfred Hafner

The Social Contract in the MENA Region and the Energy Sector Reforms

By Sara Brzuszkiewicz, Fondazione Eni Enrico Mattei

Summary

During the last few years and because of the low oil prices in particular, the increasing awareness of the unsustainability of subsidized systems led several MENA countries to take steps to lower subsidies, which have been part of the social contract for decades, especially as far as the energy sector is concerned. Nowadays, the need for reforms is compelling for more than one reason. Namely, the subsidized system distorts market trends, fosters inefficient use of resources, depresses foreign direct investment and fuels overconsumption, which is no longer sustainable, particularly as far as the population growth in most of the MENA countries is concerned. In this paper both the resource-abundant countries and the energy importing nations will be analyzed, in order to investigate similarities and differences between the two and to carry out an initial assessment of the reforms in two representative countries, namely Saudi Arabia, exporting country par excellence, and Egypt, which imports energy.

Keywords: Energy Sector, Subsidies, Subsidy Reforms, MENA Region, Saudi Arabia, Egypt, Rentier State, Resource Curse Theories

JEL Classification: O1, O13

Address for correspondence:
Sara Brzuszkiewicz
Fondazione Eni Enrico Mattei
C.so Magenta 63
20123 Milan
Italy
E-mail: sara.brzuszkiewicz@feem.it

The Social Contract in the MENA region and the Energy Sector Reforms

Abstract: during the last few years and because of the low oil prices in particular, the increasing awareness of the unsustainability of subsidized systems led several MENA countries to take steps to lower subsidies, which have been part of the social contract for decades, especially as far as the energy sector is concerned.

Nowadays, the need for reforms is compelling for more than one reason. Namely, the subsidised system distorts market trends, fosters inefficient use of resources, depresses foreign direct investment and fuels overconsumption, which is no longer sustainable, particularly as far as the population growth in most of the MENA countries is concerned.

In this paper both the resource-abundant countries and the energy importing nations will be analysed, in order to investigate similarities and differences between the two and to carry out an initial assessment of the reforms in two representative countries, namely Saudi Arabia, exporting country *par excellence*, and Egypt, which imports energy.

Keywords: Energy sector, subsidies, subsidy reforms, MENA region, Saudi Arabia, Egypt, rentier state, resource curse theories

Table of Contents:

3.2 The case of Egypt: El-Sīsī energy policies between past and future

Conclusions

References

Introduction

After the Arab uprisings, the debate over the concept of social contract, which relates to the processes of creation and legitimization of authority and the response of individuals and societal aggregates, acquired unprecedented significance in the whole MENA region.

Shortly after the turmoil, subsidy spending has risen in response to the greater social demands that have accompanied the wave of political transitions in the area.

Nevertheless, after the first post-revolutionary phase, the increasing awareness of the unsustainability of subsidized systems led several MENA countries to take steps to lower subsidies, which have been part of the social contract for decades, especially as far as the energy sector is concerned.

For many years, reducing energy subsidies in the MENA region has represented a sort of taboo. For citizens, energy subsidies have served as a key social safety net, while for rulers, they have been used as a tool for limiting democracy and equality demands and forcing people to comply with the political status quo.

At the same time, Middle Eastern and North African countries were exposed to the conflicting pressures exerted by international institutions like the International Energy Agency (IEA), the World Bank and the International Monetary Fund (IMF) to limit national spending for subsidies.

Nowadays, the need for reforms is compelling for more than one reason. Namely, the subsidised system distorts market trends, fosters inefficient use of resources, depresses foreign direct investment and fuels overconsumption, which is no longer sustainable, particularly as far as the population growth in most of the MENA countries is concerned.

Given these pressures and the enormous constraints that energy subsidies place on government budgets, between 2013 and 2014 nearly thirty countries undertook energy sector reforms,[1] among which there are Tunisia, Egypt, Iran, United Arab Emirates, while Saudi Arabia inaugurated projects of reforms in 2015.

In addition, since June 2014 global oil prices have fallen substantially, further exacerbating already existing pressures on national fiscal budgets.

"Perhaps more importantly, falling oil prices have given local leadership an argument to work on reforms, albeit cautiously".[2]

[1] S. Whitley – L. van der Burg, *Fossil Fuel Subsidy Reform: From Rhetoric to Reality*, Working Paper, the Global Commission on the Economy and Climate, 2015: [http://newclimateeconomy.report/misc/working-papers].

[2] T. Boersma – S. Griffiths, *Reforming Energy Subsidies: Initial Lessons from the United Arab Emirates*, Brookings – Masdar Institute, Abu Dhabi, January 2016, p. 2.

Clearly, each country in the GCC, or wider MENA region for that matter, has its own political dynamics and unique political economy. Particularly, hydrocarbon producers possess different characteristics from resource-importing countries.

Therefore, in this paper both the former and the latter instances of energy contexts are analysed.

The first chapter, *The social contract in the MENA region before and after the Arab Springs,* provides an overview of the significance of subsidies in the framework of the social contract in the MENA region, underlining the impact of the *Arab Springs*[3] on the debate concerning the need for reforms.

Moreover, it analyses the very term social contract and its significance in the framework of the energy production and supply in the area.

The second section of the study, *Exporting countries,* focuses on the resource-abundant states and their peculiar features.

The concept of rentier state is put into perspective to observe the contemporary trends and the resource-curse theories - which suggest that many social evils are caused by the resource abundancy - are contextualized within the MENA region, underlying both their fundamental insights and their shortcomings.

In the last part of this chapter the analysis is carried out through the case study concerning Saudi Arabia and the reforms that the Kingdom is undertaking, which are compared to the steps taken in the last few years by countries with similar features, such as United Arab Emirates.

By contrast, in the third chapter, *Importing countries,* the research deals with the context of MENA nations that import resources, providing a comparison of the subsidies' management of importing and exporting countries.

In order to highlight similarities and differences occurring among various Middle Eastern and North African countries, the case of Egypt is analysed and confronted with other scenarios.

Indeed, the fundamental hypothesis is that subsidy reforms are becoming increasingly compelling both in exporting and in importing MENA countries, despite their economic, social, political and historical differences.

[3] Personally, speaking about the events of 2011 I prefer the term 'revolution' to the phrase 'Arab Spring'. Where the former conveys the meaning of a mass uprising against the rulers, the latter seems to reinforce the idea of a supposed paralysis of Arab societies before 2011, as if they entered a flourishing spring after a long intellectual winter. But things are not as easy as they seem and the static nature of North Africa has always been overestimated. In any case, the term spring could be more effective when used in the plural form, in order to underline that the events of 2011 do not represent a monolithic phenomenon, which has been reproduced from one country to another in the same way.

1. The social contract in the MENA region before and after the *Arab Springs*

a. Subsidies and the social contract: a conceptual framework

For many years in the MENA region, both in importing and exporting countries, energy subsidies have played a major role in implementing and consolidating peculiar forms of social contract between rulers and society.

Nevertheless, the concepts behind those terms imply a heterogeneous set of cases and situations, and scholars do not always clarify the notions of subsidies and social contract.

As far as the very term "subsidy" is concerned, there is no universally accepted definition of this word, and international organizations such as the International Energy Agency (IEA), World Trade Organization (WTO), and International Monetary Fund (IMF) have different definitions.

One of the most effective definitions characterizes subsidies as measures that keep prices for consumers below the market level, keep prices for producers above the market level, or reduce costs for consumers and producers by giving direct or indirect support.

Subsidies for fossil fuels, such as oil, gas and coal, take several forms and are provided along the full value chain from exploration to production and consumption.

According to the World Trade Organization (WTO) definition, subsidies include:

- all government financial contributions or direct support;
- transfer of risk through provision of debt, equity and guarantees;
- forgone revenue through tax breaks;
- provision of infrastructure, goods and services below market value; and 5) royalty breaks and investment in infrastructure.[4]

In general, the unit subsidy is calculated as the difference between the actual selling price of a product or service and a benchmark price that reflects the free market value.

Moreover, energy subsidies can be either explicit or implicit. To give an example of the explicit form, international companies operating in Algeria are required by law to sell a

[4] S. Whitley - L. van der Burg, *Fossil Fuel Subsidy Reform: From Rhetoric to Reality*, New Climate Economy, London and Washington, 2015, p. 6.

certain percentage of their produced natural gas domestically, at prices significantly lower than the international price.

An example of an implicit subsidy is a government in an oil producing country mandating the state owned oil producing company to sell their products at a cost that is above the production cost, yet far below the international market price.

In other words, subsidies are not always as visible as it may seem. *"Interventions to reduce the price of goods and services can be channelled through budget transfers directly to consumers or producers (explicit subsidies) or through administrative setting of prices without compensating budget appropriations (implicit subsidies).*

Moreover, pre-tax consumer subsidies arise when the price paid by consumers (that is, firms and households) is below the cost of supplying energy.

On the contrary, post-tax consumer subsidies arise when the price paid by consumers is below the supply cost of energy plus an appropriate 'Pigouvian' (or 'corrective') tax that reflects the environmental damage associated with energy consumption and an additional consumption tax that should be applied to all consumption goods for raising revenues".[5]

At the same time, the concept of social contract is even more complex than that of subsidy.

It refers to theories, originated during the Age of Enlightenment, concerning the relationships between national authority and citizens.

According to the basic meaning of the social contract, individuals voluntarily surrender some of their freedoms – and rights – in exchange of protection and services.

In Thomas Hobbes's perspective, without social contract people used to leave in a *state of nature*, characterized by violence of all against all, insecurity and uncertainty.[6]

In order to acquire better living conditions and escape from this state of nature, societies rationally consent to give up their natural freedoms to obtain benefits from a political, structured order.

In this perspective, the notion of social contract is strictly intertwined with the debate on energy subsidies, the resource course theories and the concept of *rentier state*,[7] as the social contract in the MENA region pivots on the strategic redistribution of rents.[8]

As mentioned above, a key outcome of the Arab uprisings has been a significant increase in the prices needed by the countries to manage their fiscal positions. Stated differently, in the

[5] D. Coady – I. Parry – L. Sears – B. Shang, *How Large Are Global Energy Subsidies?,* IMF Working Paper, International Monetary Fund, Washington, May 2015, p. 5.
[6] T. Hobbes, *Leviathan*.
[7] H. al-Beblawi – G. Luciani, "The Rentier State in the Arab World", in G. Luciani, *The Arab State*, London, Routledge, 1990.
[8] A. Pegels, *Green Industrial Policy in Emerging Countries*, London, Routledge, 2014, p. 148.

aftermath of the turmoil, the surviving Arab regimes and the new ones needed to meet the basic needs of their populations. Failure to meet these expectations would contribute to the growing radicalization and opposition.

Such a strategy required increasing public spending on crucial socio-economic necessities such as jobs and subsidies. These issues are likely to represent long-term challenges for MENA countries, which might be related to the so-called resource curse theories.

According to these theories, resource endowments are not a blessing but a curse – one that constrains growth, feeds corruption and fuels conflict.

At the same time, the charge that natural-resources abundance retards political change and entrenches regimes finds its milestone in the concept of *rentier state*.

The members of the rentier elites capture natural-resource rents and use them to create patronage networks that consolidate their power. It is argued that these elites have strong vested interests in maintaining the status quo and thus act to suppress criticism and potential political challengers through a sort of tacit agreement with citizens: low fiscal pressure in exchange of low democratic demands.[9]

Both the resource curse theories and the concept of *rentier state* will be analysed in the following sections of the study.

Particularly, these notions will be investigated in the second chapter, which will be centred on resource-abundant MENA countries.

b. The social contract before the *Arab Springs*: economic and social effects of subsidies

As far as the MENA region is concerned, most of the countries apply energy subsidies, from Algeria to Iran, from Egypt to the United Arab Emirates (UAE), and the region accounts for 50 per cent of global pre-tax energy subsidies, representing over 8.5 per cent of regional GDP or 22 per cent of total government revenues.[10]

For decades, Middle Eastern autocracies sought the approval of the populace through the provision of food and other essentials at below-market prices. Described as the *democracy of bread* by Tunisian scholar Larbi Sadiki[11], the 1973 rise in global commodity prices

[9] G. Bahgat, "The Impact of the Arab Spring on the Energy Sector: Opportunities and Risks", *The World Financial Review*, November 16, 2012.

[10] A. Pegels, *Green Industrial Policy in Emerging Countries*, London, Routledge, 2014, p. 148.

[11] Oxford Business Group, "Democracy of bread: The subsidy system is a burden on the budget": [http://www.oxfordbusinessgroup.com/analysis/democracy-bread-subsidy-system-burden-budget].

cemented the practice of subsidization so securely that, despite a number of attempts to reduce them over the years, they represent a significant part of domestic policies to this day.
In 1977 for instance, Egyptian President Anwar al-Sadat attempted to remove the flour, rice and cooking oil subsidies: the result was a near-revolution that saw hundreds of thousands of protesters descend on the capital and the hasty re-implementation of the subsidy system.

In the last few years, energy subsidies has become increasingly unsustainable in the whole MENA region.
Obviously, the low prices of oil have been one of the major reasons for the increasing unsustainability of subsidised system.
Indeed, with lower prices exporting countries gain smaller revenues, thus suffering from a greater fiscal pressure.
The decline in oil prices that began in the middle of 2014 presents an opportunity for governments to reform their fuel subsidies and face several unresolved social issues.
Indeed, the subsidized system systematically fosters a number of economic and social tensions that – without seriously implemented reforms - are likely to increase in the near future.
From an economical perspective, according to IMF estimates, pre-tax energy subsidies in the region amounted to $237 billion in 2011, equivalent to 48 percent of world subsidies, 8.6 percent of regional GDP, or 22 percent of government revenue.[12]
In the MENA region, *"energy subsidies account for the bulk of subsidies. About 50 per cent of the total cost of pre-tax energy subsidies ($119.3 billion or 4.3 percent of GDP) is related to petroleum products, another 23 per cent ($55.2 billion or 2 per cent of GDP) to natural gas, and 26 per cent ($62 billion or 2.3 per cent of GDP) to electricity".*[13]
Electricity subsidies are widespread in the MENA region, but their magnitude is more difficult to estimate with precision because of lack of data and the complexity of subsidization modalities. Generally, subsidies arise when electricity revenues are below production costs. This may occur when tariffs are set below cost recovery levels, when illegal connection and leakages are widespread, or when revenue collection is low, reflecting the so-called nontechnical losses.
Pre-tax electricity subsidies are above 2 per cent of GDP in close to half of the MENA countries, with Lebanon and Jordan bearing the highest subsidy bill in 2011.

[12] C. Sdralevich – R. Sab – Y. Zouhar – G. Albertin, *Subsidy Reform in the Middle East and North Africa, Recent Progress and Challenges Ahead*, International Monetary Fund, 2014, p. 3.
[13] *Ibid.* p. 4.

In contrast, food subsidies amounted to $21.6 billion or 0.7 percent of GDP in 2011.

In addition, many countries maintain subsidies on water, financial products, medicines, housing, and other products and services that are difficult to measure.

As highlighted by Prasad, Abdel Moneim and Martinez, accounting for the full economic, social and environmental costs and benefits of subsidies for fossil fuels, along with the development of other government interventions to achieve the same objectives, has led to demands to start removing them.[14]

As a matter of common knowledge, the subsidised system presents more than one shortcoming. Namely, energy subsidies can inhibit sustainable economic development by creating a burden on government budgets and reduce resources that could be put to more efficient use within the economy.

Furthermore, from a social perspective, subsidies tend to increase social and economic inequality by undermining access to affordable energy and benefiting the rich rather than the poorest members of society.

Indeed, the choice of selling energy at a lower price favours the rich, because their consumption rates are normally higher than the national average.

Several studies have found that subsidies to fossil-fuel use tend to benefit high-income households more than the poor, due to the former's higher per capita consumption levels.

According to the IEG study, the bottom 40 per cent of the population in terms of income distribution received only 15-20 per cent of the fuel subsidies in developing countries.[15]

Inevitably, these recurrent social patterns have the potential to foster interclass tensions and low-income people's dissatisfaction and resentment.

In addition, in the recent past the ruling élites benefitted from these peculiar conjunctures even because they simply did not use to pay for energy, as the case of Algerian and Egyptian army apparatuses and the Saudi Royal Family clearly demonstrate.

Moreover, opponents to the subsidised system notice that energy subsidies are likely to reduce the competitiveness of key industries, including low-carbon businesses, by discouraging investment in renewable energy and energy efficiency.

As far as the overconsumption is concerned, which is fostered by subsidies, it is worth noting that it may also compromise energy security[16] and public health.

---

[14] A. Prasad – H. Abdel Moneim – P. Garcia Martinez, "Macroprudential Policy and Financial Stability in the Arab Region", *IMF Working Paper*, May 2016, p. 1.

[15] 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, November 2011, p. 7.

[16] For an in-depth analysis of the sector security outlooks in the MENA region, see S. Brzuszkiewicz, *The Evolving Geopolitics of North Africa and its Impact on Energy Markets*, FEEM Press, Fondazione Eni Enrico Mattei, 2016.

Experts, rulers and business actors in the Middle East and North Africa are becoming increasingly aware about the exigence of reforming energy subsidies and the weaknesses of a subsidised system.

So far, according to Sdralevich, Sab, Zouhar, and Albertin,[17] MENA countries that apply subsidies could be broadly classified in three categories:

- Countries that set the prices of goods and services below the cost of importation or domestic production, and cover the ensuing pre-tax subsidies through fiscal or quasi-fiscal resources (e.g., electricity in Lebanon and petroleum products in Egypt);

- Countries where prices are set high enough to cover goods and services' supply costs, but not enough to be consistent with prevailing tax rates, giving rise to a post-tax subsidy in the form of foregone tax revenues. Some countries have automatic price adjustment mechanisms for certain products (especially fuels, as is the case in Jordan, Mauritania, and Morocco);

- Natural resource–rich countries where domestic fuel prices are below international prices, reflecting the low cost of domestic extraction, as the case of Saudi Arabia reveals.

Despite these differences, subsidies' weaknesses have become increasingly evident all over the region.

The Gulf countries for instance, do not have enough electricity to supply the overconsuming domestic market, and blackouts are the norm in many periods of the year.

Similarly, in North Africa, the yearly increase in energy consumption is 6-7%, that is to say that the consumption is likely to double within a decade or little more.

Before dealing with the in-depth analysis of two fundamental case studies in the following chapters of the inquiry, an overview of some significant scenarios may enhance the understanding of the urgency in reforms.

- *Morocco*

[17] C. Sdralevich – R. Sab – Y. Zouhar – G. Albertin, *Subsidy Reform in the Middle East and North Africa, Recent Progress and Challenges Ahead*, International Monetary Fund, 2014, p. 4.

In Morocco, due to demographic and economic growth, electricity demand grew at an average annual rate of 6.7% from 2003 to 2013, leading to an energy consumption of 32,015 GWh at the end of that year. Annual consumption per capita has steadily increased from 483 kWh in 2002 to 843 kWh in 2013.

Morocco's energy subsidy bill at its peak in 2012 had become almost the size of the overall fiscal deficit, as much as spending on investment, and more than the spending on health and education combined, according to IMF figures.

- *Egypt*[18]

As far as Egypt is concerned, over the past five years, the annual energy production grew on average by 1% compared to annual average consumption growth of 5.3%, thus creating an increasing gap between supply and demand.[19]

Egypt is the largest non-OPEC oil producer in Africa, and the continent's largest consumer of oil and natural gas, which account for 94% of Egypt's primary energy consumption. Energy demand is increasing rapidly as the result of population growth. This increased demand is posing a challenge for Egypt's government as production of oil and gas is falling, and oil consumption has outpaced production since 2010. Combined with aging infrastructure this is causing frequent electricity blackouts.

In 2013, subsidies to fossil fuel consumption accounted for 12% of Egypt's GDP or US$32 billion and absorbed around 20% of public spending (exceeding expenditure on health, education and infrastructure combined), making Egypt the world's eighth largest spender on fossil fuel subsidies.[20] Motor fuels and LPG are subsidised for general consumption, and natural gas and fuel subsidies are provided to energy-intensive industries in order to promote their competitiveness. A World Bank study in 2005 estimated that a 50% reduction in energy subsidies and a uniform distribution of the savings to the population could reduce poverty in the country by 33%.

Moreover, expenditure on a variety of fuels accounts for around 70% of total spending on subsidies, and Egypt imports a number of fuel types – including around 50% of the butane, which is widely used in canister form by Egyptian households.

[18] Egypt will constitute a case study in the third chapter of the study.
[19] "Egypt's Energy Market: Challenges Creating Opportunities", *Egypt of the Future*, February 18, 2015.
[20] S. Whitley – L. Van Der Burg, *Fossil Fuel Subsidy Reform: From Rhetoric to Reality*, Working Paper, the Global Commission on the Economy and Climate, 2015: [http://newclimateeconomy.report/misc/working-papers], p. 57.

The lower security in the wake of the 2011 uprising led to a marked increase in illegal butane trading, which in turn resulted in the reduced availability of subsidised stock. The subsequent protests, which accompanied each butane crisis, served as a reminder of the politically sensitive nature of the subsidy question.

As in the other MENA countries, the subsidized system proved to favour the economic – and political – élites. In 2013 for instance, the Egyptian Ministry of Petroleum found that 92% of petrol subsidies and 66% of natural gas subsidies went to the richest 20% of consumers.[21]

According to other estimates, Egypt's expenditure on energy subsidies reached a staggering EGP143.7 billion (close to USD21 billion) in the financial year 2013/14, a figure representing 19.5 per cent of total government spending, or almost the entire value of aid received by Egypt from Middle Eastern donors since mid-2012.

- *Tunisia*

In Tunisia, another North African state, in 2011 natural gas accounted for 45% of total primary energy consumption, oil for 40%, and biomass for 15%. In 2013, 98% of Tunisia's electricity was generated from fossil fuels, primarily natural gas. Since the mid-1980s, Tunisia's petroleum production has steadily declined, and the country is currently a net importer of oil and gas. As energy demand is expected to grow by 4% annually between 2010 and 2030, large investments in the energy sector are needed, part of which the government plans to meet with renewable energy sources, including the aim to produce 11% of electricity from renewables by 2016 and 25% by 2030.

Tunisia subsidises fossil fuels in a number of ways, with the stated parallel objectives of ensuring the competitiveness of energy intensive industries and supporting social welfare. Historically, the largest subsidies have been for LPG and diesel by applying fuel and electricity price controls.

The government compensates the energy companies for the difference between the set natural gas and petroleum prices and the corresponding international prices. Energy subsidy costs tripled from an average of 0.9% of GDP in 2010 to 2.6% of GDP in 2012, as domestic retail prices were kept artificially low while international oil prices were rising. *"In addition to placing an unsustainable burden on the government's budget, the energy subsidies are an inefficient means to ensure social*

[21] *Ibid.*

protection since the richest households capture 40 times more benefit from them than do low-income households".[22]

The Tunisian government has attempted to reform these subsidies several times between 2005 and 2009, but has often reversed reforms in response to protests linked to unemployment and rising living costs.

- *Saudi Arabia*

Saudi Arabia is the largest oil-consuming nation in the Middle East. For instance, the country consumed 2.9 million barrels per day of oil in 2013, almost double the consumption in 2000, because of strong industrial growth and subsidised prices.[23]

The country often does not produce enough electricity to supply the overconsuming domestic market, and blackouts are the norm in many periods of the year, like in the other Gulf countries.

In fact, irregular energy services are a consequence of both the overconsumption and the decade-long underinvestment in electricity generation and distribution networks, which characterized many countries of the MENA region.

In this respect, el-Katiri and Fattouh claim that this situation is further exacerbated by a culture of non-payment of utility bills by some parts of the population.[24]

Far from being erroneous, speaking about a culture of non-payment should be simplistic and misleading.

Indeed, as mentioned above, ruling élites such as the army in the case of Egypt and the Royal Family in Saudi Arabia or the United Arab Emirates do not pay their energy consumption. Nonetheless, it is a matter of customary privileges, which do not belong to the population in general and are causing an increasing resentment among citizens.

What is undeniable is that the abovementioned blackouts proportionally affect middle-income households and small businesses more than any other social group, and long waiting times for new electricity connections for private households and businesses are often the consequence.

---

[22] R. Bridle – L. Kisten – P. Wooders, *Fossil-Fuel Subsidies: A Barrier to Renewable Energy in Five Middle and North African Countries*, Global Subsidies Initiative, Geneva, 2014: [http://www.iisd.org/gsi/sites/default/files/fossil-fuel-subsidies-renewableenergy-middle-east-north-african-countri%20%20%20.pdf].

[23] American Energy Information Administration, *Saudi Arabia: Country Analysis Report*, 2013.

[24] El-Katiri, L., B. Fattouh and P. Segal, 'Anatomy of an Oil-Based Welfare State: Rent Distribution in Kuwait' in: D. Held, D. and K. Coates-Ulrichsen, (eds.), *The Transformation of the Gulf States: Politics, Economics and the Global Order*, London, Routledge, 2011.

These brief country overviews imply that, in order to keep pace with the consumption, states should double consumption every decade or little more. Unquestionably, this is an impossible option.

Consequently, as evident progressively throughout the 2000s, energy subsidies constitute a significant fiscal burden.

In this respect, El-Katiri and Fattouh underlined in 2015 that, with rising world market prices for oil and natural gas since the early 2000s, the MENA region's parallel surge in domestic demand has translated into a rapid growth in fiscal expenditure on energy subsidies in importing countries such as Morocco, Egypt, Jordan, Syria, and Lebanon. Yemen's energy subsidy bill for 2013/14 for instance, was most recently estimated at around USD3.5 billion, a third of government expenditure and in excess of the country's budgeted deficit of USD3.2 billion in the fiscal year.[25]

Despite this situation, MENA countries procrastinated reforms. Two fundamental concerns restrained rulers from implementing effective subsidy reforms.

Firstly, they were well aware that removing subsidies would have hurt élites and internal powers that use to support them and providing votes for them.

Secondly, authorities feared that, without subsidies, populace would have been less obliging to the status quo.[26]

In spite of these prolonged hesitations, international pressures insisted in highlighting the *subsidy emergency*.

The International Monetary Fund (IMF) for instance, has been invoking subsidy reform since more than a decade. In a recent report, it highlights that energy subsidies are dramatically higher than previously thought. Estimates for global energy subsidies in 2011 have been revised to US $ 4.2 trillion, more than double the US $ 2.0 trillion previously reported in a 2013 IMF book, *Energy Subsidy Reform: Lessons and Implications*.[27]

According to the IMF, the sustained interest in energy subsidy reform also reflects increasing recognition of the perverse environmental, fiscal, macroeconomic, and social consequences of energy subsidies.

Eliminating post-tax subsidies in 2015 could raise government revenue by $2.9 trillion (3.6 percent of global GDP), cut global CO2 emissions by more than 20 percent, and cut pre-mature air pollution

[25] L. el-Katiri – B. Fattouh, *A Brief Political Economy of Energy Subsidies in the Middle East and North Africa*, OIES Paper: MEP 11, Oxford Institute for Energy Studies, Oxford, 2015.

[26] This relates to the concept of rentier state, which will be analysed in the following sections of the study.

[27] B. J. Clements – D. Coady – S. Fabrizio – S. Gupta – T. Serge Coleridge Alleyne - C. A. Sdralevich, *Energy Subsidy Reform : Lessons and Implications*, IMF Working Paper, International Monetary Fund, Washington, September 2013.

deaths by more than half. After allowing for the higher energy costs faced by consumers, this action would raise global economic welfare by $1.8 trillion (2.2 percent of global GDP).[28]

The approach of the World Bank is similar to that of the FMI. In 2014 for instance, the World Bank created a new facility to help countries reform their energy subsidies and put in place social protection measures to help the poor during this transition. The Energy Subsidy Reform Technical Assistance and Delivery Facility, led by the Bank's Energy Sector Management Assistance Program (ESMAP), is already supporting World Bank engagements in a number of regions.

More explicitly, foreign economic assistance programs are usually subordinated to the will of governments to implement subsidy reforms.[29]

For all these reasons, in the whole MENA regions governments were exposed to contrasting pressures. On a domestic perspective, they refrain reforms in order to avoid protests and loss of consensus. Internationally, institutions like the International Monetary Fund and the World Bank increased their soliciting about reforms.

1.3 The post-revolutionary paths between fears and changes

During the first decade of the 21st century, the issue of greater socio-economic justice acquired new significance in the whole MENA region and began to play a major role at the heart of MENA politics.

From Tunisia to Egypt, from Libya to Saudi Arabia, from Algeria to Bahrain, citizens invaded squares and streets to claim *ḥurrīa wa karāma*, "freedom and dignity", two concepts that have been variably conjugated.

It is licit to talk about revolutions only in some cases, namely those of Tunisia, Egypt, Libya, Syria, Yemen, and Bahrain.

Nevertheless, in the whole MENA region a wave of protests shook not only the power, but also the very conception of democracy and civil society.

The fundamental instances of protesters were the same in every country of the area:

- high unemployment rates;
- deep dissatisfaction of the youngsters, which represented the breeding ground for the protests; widespread social imbalances, caused and exacerbated by a range of different social, political, economic and ethnical factors;
- repressive and authoritarian power combined with extended violations of civil rights such as freedom of speech, press and assembly;

[28] D. Coady – I. Parry – L. Sears – B. Shang, *How Large Are Global Energy Subsidies?*, IMF Working Paper, International Monetary Fund, Washington, May 2015, p. 6.

[29] In compliance with the international relations strategy colloquially known as *carrot and stick* approach.

- high levels of corruption in both the private and public sectors.

Given these premises, Tunisia was the first country to begin the revolution. On December 17, 2010 Mohammed Bouazizi, a young Tunisian street vendor, set himself on fire protesting against the confiscation of his wares.

After Tunisia, turmoil propagated in Egypt at the end of January 2011 and on February 11, 2011, Hosni Mubarak resigned and power was transferred to the Supreme Council of the Armed Forces (SCAF), and then in all the above mentioned countries.

During the *Arab Springs*, for the first time in contemporary Arab history, people expressed their discontent in organized and extremely effective ways.

These events obtained extensive media coverage but, most importantly, they ousted rulers who had governed for decades and shook regimes in the whole area.

Therefore, the exigence of reforms and the international pressures clashed with fears of a new wave of protests.

For this reason, in the aftermath of the turmoil all governments guaranteed or even increased energy subsidies.

The challenging economic environment and rising social demands have increased risks to macroeconomic stability. "*Governments have responded to high commodity prices and growing social hardship by increasing spending—including on wages and food and fuel subsidies—even as revenues faltered. As a result, fiscal deficits in oil-importing countries increased in 2012 to about 8.5 percent of GDP on average from 5 percent in 2009, levels that are increasingly difficult to sustain. Even in oil-exporting countries, which have performed relatively well, expansionary policies have pushed fiscal and current account breakeven oil prices upwards".*[30]

Nevertheless, soon after the restauration of a sufficient degree of stability, the shortcomings of a subsidised system became more evident, and citizens begun to understand that energy subsidies were largely inequitable as they naturally accrue most to the largest users – energy-intensive industries, and medium-to high-income households.

Petroleum product subsidies in particular benefit primarily the urban middle class, and households that can afford a car.

Therefore, the reform issue regained momentum, especially because the first MENA examples of subsidy reforms provide little evidence of the often-feared social backlash. Even though there are a number of cases where indeed price increases caused protests and upheaval (e.g. Indonesia and

[30] C. Sdralevich – R. Sab – Y. Zouhar – G. Albertin, *Subsidy Reform in the Middle East and North Africa, Recent Progress and Challenges Ahead*, International Monetary Fund, 2014, p. 2.

Kuwait), it is undeniable that younger generations in particular have a better appreciation of the actual costs of resources like water and electricity, and more affinity with conservation and sustainability, and therefore do not *per definition* obstruct change.

In this respect, UAE are a case in point. It is one of the tenth-largest oil and gas producers and it holds the seventh-largest proven oil reserves worldwide. It is a major oil exporter and oil and gas revenues account for about 80% of government revenues. The UAE has one of the world's highest rates of petroleum consumption per capita. It has succeeded in shifting almost all power consumption to gas but is increasing gas imports because domestic production of natural gas has not kept pace with demand.

The IMF estimates that fossil fuel subsidies in the UAE (pre-tax and foregone consumption tax revenue) were US$22 billion in 2013, and fell to US$16 billion in 2015. Despite the UAE's large subsidies to fuels (petrol, diesel, kerosene and LPG), it has the highest petrol prices in the Gulf. This has led to the smuggling of petroleum products from neighbouring Oman and Saudi Arabia, where petrol prices are much cheaper.

The UAE is one of the few countries in the Gulf region that has attempted gradually to increase electricity and fuel prices with the aim of curbing the strong growth in the consumption of electricity and petrol and diesel for transport and reducing dependence on subsidies.

In 2010, the price of petrol across the UAE was raised by 26% to a still low of US$0.47 per litre, and this price has increased to US$0.53 per litre as of September 2015.[31]

Nevertheless, we have to be cautious about transferring previous lessons one-on-one to other cases. MENA countries' profiles show multiple differences in terms of demographics, education, employment distribution, sustainability awareness, and these different features are likely to affect the path to reform.

In the last few years, the wind has been changing and many Middle Eastern and North African countries has begun to consider the hypothesis of structural subsidies' reform.

In order to analyse the different reform processes that are now occurring in the region, a fundamental distinction should be made between resource-abundant countries and importing countries, thus exemplifying the variations in reforms' implementation and evaluating the likelihood of reforms' success in countries with extremely different features.

Therefore, in the following chapters of the present study two instances of subsidised systems will be analysed. The case of Saudi Arabia, a resource-abundant country, will be compared to the example of Egypt, an importing nation.

[31] Reuters, Abu Dhabi May Reform Power, Water Subsidies – IMF Official. Gulf Business, 5 November 2014: [http://gulfbusiness.com/2014/11/abu-dhabi-considers-reforming-electricity-water-subsidies-imofficial/#.VTZ65JTF_Iw].

2. Exporting countries

Energy exporting countries and resources abundant nations often represent the subsidised system *par excellence.*

In resource-abundant countries, the natural resource rents, particularly in concentrated form, foster the mechanism according to which, to stay in power, the governments need to find a way to redistribute rents to favoured group, and this tends to go to the detriment of effective and consistent political economy.

As far as the Gulf region is concerned, in Saudi Arabia, United Arab Emirates, Qatar, Bahrein, Kuwait and Oman, subsidies have been applied to energy and other necessities for many decades. They were intrinsically part of the aforementioned social contract and used to have a strong impact over society, economics and politics.

The pre-oil economies of the communities distributed along the shoreline of the Gulf were dominated by the pearl industry, which forged social relationships and hierarchies within a segmented labour force.

This is the reason why the pearl became the heritage symbol of the modern Gulf States and it appeared on banknotes and monuments throughout the region.

Once that oil had been discovered, the Gulf region started taking on some of the features it still shows. Oil was first discovered in the Middle East in southwest Persia in 1908 and later was found in commercial quantities in northern Iraq in 1927. Exploration quickly began in the neighbouring Gulf sheikhdoms, where geological conditions were similar to those of resource-abundant areas in Iran.

Elsewhere in the Gulf events followed a similar pattern, with the exception the modern United Arab Emirates and Oman, where oil became a significant resource only several decades later.

As far as the exports are concerned, oil began to be exported in commercial quantities in the late 1940s and production rose rapidly in the 1950s and 1960s. This coincided with the independence of Kuwait (1961) and the UAE, Bahrain, and Qatar (1971).

During the last decades, the energy sector, both as far as oil and gas are concerned, has been hugely subsidised.

In the last few years however, the high number of weaknesses and shortcomings of the subsidised system and the evolving energy consumption patterns in the region led governments to reorient their policies and to begin a series of gradual subsidies reforms.

Perhaps most importantly, the decline in oil prices that began in the middle of 2014[32] speeded up the process, as the fiscal position of the Gulf countries was becoming increasingly delicate.

Gulf Cooperation Council (GCC) economies are largely volatile due to their almost exclusive reliance on natural resources.

Therefore, in 2014 budget surpluses quickly turned into deficits. The International Monetary Fund (IMF) has projected that lower oil prices cost Arab oil exporters some US$360 billion in lost revenues in 2015 and predicted that the six GCC states will face a cumulative fiscal deficit of as much as US$1 trillion over the next five years.[33]

Government revenues in Oman for example fell by 35.9 percent in the first nine months of 2015 on the back of a 45.5 percent decline in oil revenues, while in Qatar the value of hydrocarbon exports has plunged 40.5 percent year-on-year between since July 2014.

The initial impacts from subsidy reforms have reduced GCC energy subsidies from 6.5 percent of GDP in 2013 to 3.4 percent in 2015.[34]

Kuwait for instance, recorded a 45.2 percent year-on-year fall in government revenues for the first eight months of the 2015–16 fiscal year and a near-identical 46.1 percent drop in oil revenues over the same period.[35]

The scale and severity of the budgetary shortfalls caused by the continuing low price of oil throughout 2015 eventually left Gulf officials with little choice but to introduce various measures intended to bring spending down from surplus-fueled highs.

Therefore, Gulf States are emblematic examples of the changes occurring when resource-abundant countries gradually recognise the need for reform.

---

[32] In June 2014, the price of a barrel of Brent crude was approximately $115, but by the end of January it had fallen below $50.

[33] K. Coates Ulrichsen, *The Politics of Economic Reform in Arab Gulf States*, Rice's University Baker Institute for Public Policy, Houston, 2016, p. 3.

[34] T. Boersma – S. Griffiths, *Reforming Energy Subsidies: Initial Lessons from the United Arab Emirates*, Brookings – Masdar Institute, Abu Dhabi, January 2016.

[35] "Kuwait Sees a Record Budget Deficit on Falling Oil Income," *Kuwait Times*, January 28, 2016.

Moreover, Gulf States represents an extremely interesting area of research because of their peculiarities and major demographic and economic traits, which allowed governments to maintain the subsidised system for such a long period.

Bahrein, Kuwait, Oman and Qatar have less than 5 million inhabitants, of whom between 44 (Oman) and 85.7 (Qatar) percent are non-nationals.[36]

Saudi Arabia has a partially different demographic landscape. With about 31 million inhabitants and 32.3 percent of non-nationals, it is the largest and most populated country in the region.

By contrast, United Arab Emirates have little more than 8 million inhabitants but the percentage of non-national raises above 88 percent.[37]

How these different demographic ratios affect the likelihood of reforms' success will be included in this section of the paper.

Historically, abundance of natural resources and contained numbers of inhabitants have been the first two fundamental features which fostered the creation of the so-called *rentier state*, a system whose existence is indeed favoured by resources and small populations, in which the state derives a substantial portion of its national revenues from the rent of local resources to external clients.

2.1 The concept of rentier state

In the energy sector, the concept of rentier state refers to the relationship between natural resources and political power. More precisely, it is a system of managing natural resources and revenues derived from the energy sector.

According to the classical theories of rentier state[38], the members of the rentier elites capture natural-resource rents and use them to create patronage networks that consolidate their power.

This mechanism is based on a sort of a tacit agreement between those who detain power and citizens: low fiscal pressure and high standard of welfare - which are both possible thanks to the revenues from the energy sector- in return for low democratic demands and compliance with the political status quo.

Indeed, the naturally occurring wealth of rentier states precludes the need to extract income from their citizenry, and the population of those rentier states expect an income not in return for work but merely by virtue of their collective communal identity as citizens of those states.[39]

[36] Gulf Research Center. Respectively, in Bahrein non-nationals count for 52 percent of population, 69.2 in Kuwait, 44 in Oman, 85.7 in Qatar.

[37] Latest national statistics (2010-2015).

[38] See H. Mahdavy, "The Pattern and Problems of Economic Development in Rentier States: The Case of Iran", in M.A. Cook, *Studies in the Economic History of the Middle East*, Oxford, Oxford University Press, 1970 and H. Beblawi – G. Luciani, *The Rentier State*, London, Croom Helm, 1987.

In the framework of a rentier state, it is argued that the ruling classes have strong stakes in maintaining the status quo and thus act to suppress criticism, potential political challengers and internal dissent.

Historically, this phenomenon has always been a self-reinforcing mechanism, in which centralized wealth serves to consolidate the political hold of the elites.

With special reference to the Arab states, Hazem Beblawi and Giacomo Luciani pointed out four main characteristics of a rentier state:

- Rent situations predominate.
- The economy does not require a powerful domestic productive sector, as it counts on external rents.
- Only a small proportion of the working population is actually involved in the generation of the rent.

  Consequently, for the majority of citizens income and wealth do not come as the result of work but rather are the result of natural resource abundance.[40]
- The government is the principal recipient of the external rent.[41]

Because the category of rentier state is particularly exemplified in the Gulf region, this theory has been immediately associated with the oil-producing countries of this area.

Given these characteristics, rentier state theories aim at explaining highly complex issues such as the predominance of authoritarian regimes in the Middle East, the apparent lack of success of the Western model of democracy in the region and the deficit of popular representation.

Summarizing, it is not hazardous to state that the "no taxation without representation" paradigm seems to be reversed in the Gulf countries, as regimes sought to co-opt socio-political support through the spread of wealth and exhibited varying degrees of autonomy from societal demands or pressures.[42]

Particularly, Fareed Zakaria argued that, in the absence of taxes, citizens have only minor reasons for requiring the government to be responsive to their needs. According to Zakaria, the government

---

[39] A. Evin – M. Hafner – S. Taglipietra, "Perpetuating the Rentier State: Patrimonialism in a Globalized World", *The Rentier State at 25: Dismissed, Revised, Upheld?*, The Gulf Research Meeting 2013, University of Cambridge, Cambridge, 2013, p. 3.

[40] The allocative essence of the rentier state should not be confused with one of the main functions of modern nation-states, that of allocating and directing resources in order to accomplish to their duties and exercise their authority.

[41] H. Beblawi – G. Luciani, "The Rentier State in the Arab World", in G. Luciani, *The Arab State*, London: Routledge, 1990.

[42] K. Coates Ulrichsen, *The Politics of Economic Reform in Arab Gulf States*, James A. Baker III Institute for Public Policy of Rice University, Houston, p. 10.

essentially "bribes" the citizens with extensive social welfare programs, becoming a distributive state.[43]

As a matter of fact, subsidies in general, and those applied to energy in particular, represent one of the most powerful means to perpetuate the rentier state existence, as they may function as an excellent deterrent against internal dissent.[44]

Inevitably, the status of rentier states of many Gulf countries has evolved since the publication of the work of Beblawi and Luciani in 1988. Those nations for instance, have adopted increasingly sophisticated means for governing their finances and have become significant players in global financial markets, while beginning to plan for the time when they would run out of non-renewable resources.[45]

As far as the contemporary rentier states in the Gulf region are concerned, Matthew Gray introduced the theory of "Late Rentierism", hypothesizing that, in the more recent version of rentierism, states are more entrepreneurial as compared to its tradition-bound predecessors, as well as more supportive of development.[46]

At the same time, the "Late Rentierism" theory highlights that the fundamental features of the rentier states remain unaltered, along with the absence of any significant democratic transition towards democracy.

2.2 Resource curse theories and the Dutch disease

The rentier state theories, implying that the rentier state's main characteristics tend to undermine democratization and power-citizenry dialogue, are strictly linked with another strand of research, i.e. that relating to the so-called resource curse theories.

According to these theories, resource endowments are not a blessing but a curse – one that constrains growth, feeds corruption and fuels conflict.

The hypothesis of a *curse of natural resources* can be traced back to the 1970s. The subsequent two decades saw the emergence of a significant body of research proposing a link between resource production and various socio-political ills.

---

[43] Ibid.

[44] By contrast, the neo-rentier theories have less to do with subsidies, as they relate mainly to the transnational dimension of this system. Neo-rentier theory suggests that oil dependence translates into different patterns of dependence between a rentier state and consumers/producers. Different patterns of dependence affect the flow of oil revenues to a rentier state and its ability to manipulate supplies and price. In consequence, different patterns of dependence condition the types and intensity of security strategies that rentier states are likely to pursue. See I. Y. Qasem, *Neo-rentier theory: the case of Saudi Arabia*, Doctoral Thesis, Leiden University, 2016.

[45] A. Evin – M. Hafner – S. Taglipietra, "Perpetuating the Rentier State: Patrimonialism in a Globalized World", *The Rentier State at 25: Dismissed, Revised, Upheld?*, The Gulf Research Meeting 2013, University of Cambridge, Cambridge, 2013, p. 1.

[46] Ibid. p. 4.

The contents of these theories seem to be largely corroborated by the fact that numerous resource-exporting countries have failed to diversify their economies away from the extractive sector and they remain highly dependent on extractive revenues.

Such failure appears to be pronounced in the Gulf countries, which, though certainly more prosperous than they would have been without oil and gas, remain highly vulnerable to price shocks.

Linked to arguments about the centralization of wealth is the charge that natural-resources abundance retards political change and entrenches regimes, which finds its milestone in the abovementioned concept of rentier state.

Moreover, even if there is no active conflict, these revenues still tend to generate much higher levels of military spending to protect resources, which does not always contributes to internal stability.

Another strand of research that connects resource-abundance with social issues and illnesses relates to the so-called Dutch disease.

The term *Dutch disease* refers to the negative effects on manufacturing industries that took place in the Netherlands after the natural gas discoveries in the 1970s and before, and the process of real currency appreciation that followed.[47]

As a matter of common knowledge, similar setbacks affected many oil-exporting countries following the oil price shocks of the same decade.

The hypothesis underlying the concept of Dutch disease implies that a natural resource boom comes close to being a serious problem because specialization in natural resource intensive goods can be harmful to long-term growth.[48]

Indeed, increasing success in a sector may cause the decline in other sectors because, as revenues or foreign investments increase in the growing sector, the nation's currency becomes stronger. This results in the nation's other exports becoming more expensive for other countries and imports becoming cheaper, making those sectors less competitive.[49]

Like in the case of the resource curse theories, according to Dutch disease's theorists, economic and productive disequilibria may cause social tensions and resentment, primarily due to the fact that an aggressive competition for employment takes place in the growing sector while the remaining sectors are being marginalised.

---

[47] In 1977, The Economist coined the term to describe the decline of the manufacturing sector in the Netherlands after the discovery of the large Groningen natural gas field in 1959. See P. R. Krugman, "The Narrow Band, the Dutch Disease, and the Competitive Consequences of Mrs. Thatcher", *Journal of Development Economics* 27, 1987, 41–55.

[48] W. M. Corden, "Booming Sector and Dutch Disease Economics: Survey and Consolidation", *Oxford Economic Papers 36 (3)*, 1984, 359–380.

[49] For an in-depth analysis of the potential consequences of such a disequilibrium among economic sectors, see: W. M. Corden – J. P. Neary, "Booming Sector and De-Industrialisation in a Small Open Economy", *The Economic Journal*, Vol. 92, No. 368, 1982, 825-848.

Unquestionably, despite these powerful insights, this body of research presents more than one shortcoming, essentially attributable to the will of finding a *one-size-fits-all* explanation, which tends to overlook the peculiarities of every country in the region.

For these reasons, highlighting the characteristics of a real process of subsidy reform through the analysis of a chosen country may be useful to point out causes, push factor, developments and expected outcomes of reforms, as well as to find elements that are likely to be reproduced in other countries of the area.

2.3 Case study: Saudi Arabia and its precedents: is the Kingdom really changing its conception of energy?

Before dealing with the case of Saudi Arabia, whose subsidy reform is still ongoing, it is worth analysing the most significant precedent in the region, i.e. the reforms roadmap drawn by the United Arab Emirates in the last few years.[50]

The UAE is one of the tenth-largest oil and gas producers and it holds the seventh-largest proven oil reserves worldwide. Moreover, oil and gas revenues account for about 80% of government revenues.[51]

Given these peculiar features of the energy sector, analysing the Emirati reforms may shed a light on the potential implementation strategies in the whole area.

Moreover, the UAE is one of the countries that has first attempted to gradually increase electricity and fuel prices with the aim of contrasting the strong growth in the consumption rates and reducing dependence on subsidies.

Indeed, the state has been able to reduce direct energy subsidies from over 20 to 12.6 billion dollars from 2013 to 2015, achieving a reduction of about 30 percent.[52]

Even before, in 2011, a 15 percent to 20 percent increase in the cost of electricity and water was introduced for residential expats -i.e. non-nationals- industry, and government.

[50] The federation of the United Arab Emirates, born in 1971, includes Abu Dhabi, Dbai, Ajman, Al-Fujayrahi, Ras al Khaymah, Sharjah and Umm al Qaywayn.

[51] S. Whitley – L. Van Der Burg, *Fossil Fuel Subsidy Reform: From Rhetoric to Reality*, Working Paper, the Global Commission on the Economy and Climate, 2015, p. 49.

[52] Source: Emirates Nbd, www.emiratesnbd.com.

Besides, for UAE nationals, who count for less than 12 percent of total population, a modest electricity tariff increase was introduced, along with a contained water tariff for nationals with a consumption level exceeding 20,000 imperial gallons (IG)[53] per month.

What represented the main push-factor that led UAE towards subsidies' reform was the soaring demand for energy resources: gradually, the demand was overcoming supplies.

Since the beginning of the reform path in 2011, electricity and water prices have increased significantly,[54] even though, judged with international standards, they remain modest.

Interestingly, the peculiar demographic landscape of the United Arab Emirates led authorities to enforce reforms along particular implementation trajectories.

Indeed, in Dubai for instance, not all reforms apply to nationals. Indigenous people are exempted from fuel surcharge, while electricity and water prices remain significantly lower for nationals than for expats.

Similarly, in Abu Dhabi, the local populations did not suffered any significant change in their subsidies' pattern, while electricity price for residential expats rose about 40 percent.

Despite the clear gradualness of the Emirati reforms, it is undeniable that the process brought momentous changes into the subsidised system.

For the first time for instance, citizens have to pay for their water usage.

As far as the implementation phase is concerned, authorities deployed a high level of communication expertise and have been able to talk effectively with the population.

Dubai for instance, launched an extensive public relations campaign with a double aim. Firstly, it illustrated the *hows* and *whys* of the incoming tariffs' changes; secondly, it urged the population to reduce consumption, providing daily-life examples of a smarter energy usage.[55]

In the 2014, Abu Dhabi began a similar campaign, spreading for the first time new messages about sustainability and conservation, and encouraging the use of public transport and fuel-efficient vehicles.

Regarding the industrial sector, in all the UAE for commercial and industrial users under 1 megawatt (MW) there was a 7 percent increase, and a 100 percent increase for industry users that are larger than 1 MW during the summer peak, between 10 AM and 10 PM.

Globally assessed, commercial and industrial users saw their water costs rise by 82 percent.

[53] One imperial gallon corresponds with 1.2 US gallons and 4546 millilitres.

[54] There is one electricity and water authority for every Emirate and these authorities do not operate at a federal level: the Abu Dhabi Water and Electricity Authority (ADWEA), the Dubai Electricity and Water Authority (DEWA), the Sharjah Electricity and Water Authority (SEWA) and the Federal Electricity and Water Authority (FEWA).

[55] For example, house owners were invited to run their air conditioning at 24 degrees Celsius during the summer instead of 20 degrees Celsius, or to turn off the water tap while brushing one's teeth.

Moreover, at the end of July 2015, prices for gasoline and diesel were substantially reformed and currently, even though not completely deregulated, they are set monthly by a commission based on international prices.

Beside house owners and industries, subsidies for government entities were reformed too. From a symbolic perspective, the impact of this change should not be underestimated.

For government bodies, the reform removed the subsidies on electricity, as well as on water consumption.

As far as the United Arab Emirates example of subsidies' reform is concerned, many experts believe that it is too early for definitive conclusions. For instance, *"Initial data indeed suggest a drop in water usage of up to 10 percent, though other sources believe that 5 to 6 percent is more reasonable"*.[56]

With the exception of the United Arab Emirates, governments in the Gulf region have long been reluctant to endorse reforms.

Nevertheless, in the last few years, the influence of the Emirati example partially affected the neighbouring countries.

In January 2015, Kuwait announced and implemented an increase in fuel prices, but the move was met with sharp criticism in Parliament and was swiftly reversed. In September 2015, the Kuwaiti authorities made another try, announcing a new study aiming at individuating the potential consequences of fuel subsidy reform.

In October 2015, the Sultanate of Oman announced that the country was likely to start with additional gradual subsidy reforms in early 2016 to follow increased prices to industry for natural gas that were set in early 2015, as relatively low oil prices are constraining the national budget.

In the richer Qatar, the new born governmental Foundation for Energy and Sustainable Development called for subsidy reforms and the project is ongoing, even though is too early for a complete assessment.

Due to the demographic, geographic and social differences, the transferability of the Emirati reform to Saudi Arabia is far from being certain.

Particularly, the Kingdom of al-Saud has an extremely higher percentage of indigenous population compared to the United Arab Emirates[57], and all the Gulf reforms' trajectories showed the will to favour this social group over non-nationals.

[56] T. Boersma – S. Griffiths, *Reforming Energy Subsidies: Initial Lessons from the United Arab Emirates*, Brookings – Masdar Institute, Abu Dhabi, January 2016, p. 14.

[57] Non-national count for 32.3% of the whole population and 88% in the United Arab Emirates (Gulf Research Centre).

This responds to a wider policy of cultural nationalism that has been applied in many Gulf countries in the last few years, aimed at contrasting the effects of the prolonged disequilibrium between indigenous people and non-nationals workers.[58]

Despite these differences, however, since few years ago in Saudi Arabia, like in the other countries of the region, authorities and citizens have been discussing the opportunity of subsidy reform.

With no civil nuclear plants and only a minuscule amount of solar generating capacity, Saudi Arabia's domestic energy consumption currently relies almost exclusively on oil and gas.

Its domestic energy prices are among the lowest in the world and are heavily subsidised by the government—a state of affairs that has contributed to energy consumption growth rates of close to 8% a year.

Moreover, some long-lasting practices worsened this complex situation. Until a few years ago for instance, Saudi Arabia used to allocate crude oil for power stations. By so doing, power stations used also the finer components, but this is unnecessary to the goal of producing electricity, to which the less precious part of crude is sufficient.

The waste of fine components could have been avoided by converting crude oil to different components *before* sending it to power stations for electricity production, thus freeing refined products such as diesel fuel and ethane for other purposes.

As far oil products are concerned, Lucas Davis, a professor of business and economics at the University of California at Berkeley, estimated that the global annual cost of the overconsumption of gasoline and diesel alone is around $44bn and Saudi Arabia alone accounted for 27 per cent of the total global loss.

The International Monetary Fund predicted in October that if the status quo held, Saudi Arabia risked draining its financial reserves in five years.

Indeed, before the first steps of reform had been taken, the government was overspending by an average 25 to 30 percent a year.

Moreover, the Saudi energy policy of the last few decades focused on provisions regarding energy supply – projects for the creation of nuclear power plants for instance – instead of those influencing demand.

Forth these reasons, the Central Bank of Saudi Arabia was the first national institution to call for reforms at the beginning of 2015.

[58] In Qatar for instance, many energy companies' statutes explicitly declare their *qatarization* goal and are committed to maximize the number of Qatari nationals in their workforce.
For an in-depth analysis of qatarization policies see: M. al-Subaiey, *Qatarization Policy – Implementation Challenges*, Brookings Doha Center, 2014.

According to domestic and international assessments, the objective of the reform will be necessarily twofold: firstly, it will have to discourage energy overconsumption and waste; secondly, it must free up more energy resources – especially oil – for export.

On October 27, 2015, after few months devoted to research and collaboration with international energy experts, the Petroleum and Mineral Resources Minister 'Ali al‑Naimi expressed the governmental attitude towards reforms, in the framework of the Saudi Mining and Minerals Conference.

On this occasion, he confirmed that the Kingdom was engaged in studies regarding raising domestic fuel prices and cutting the *generous* energy subsidies.[59]

What really characterizes the reform process now ongoing in the Kingdom compared to other reform experiments is the emphasis placed over the different consequences that the changes are bound to have over the various social groups.

Indeed, the government is developing a mechanism to provide cash to low- and middle-income Saudis who used to rely on subsidies, while, under the previous system, 70 percent of the subsidies benefited high-income people.

Indeed, high-income social groups own more cars, live in bigger houses, and consume more water and energy than low-income households.

The challenge of removing subsidies on the low-income families and the need to design a policy that does not marginally burden them has been highlighted, and this is the reason why projects of cash distribution are being assessed.

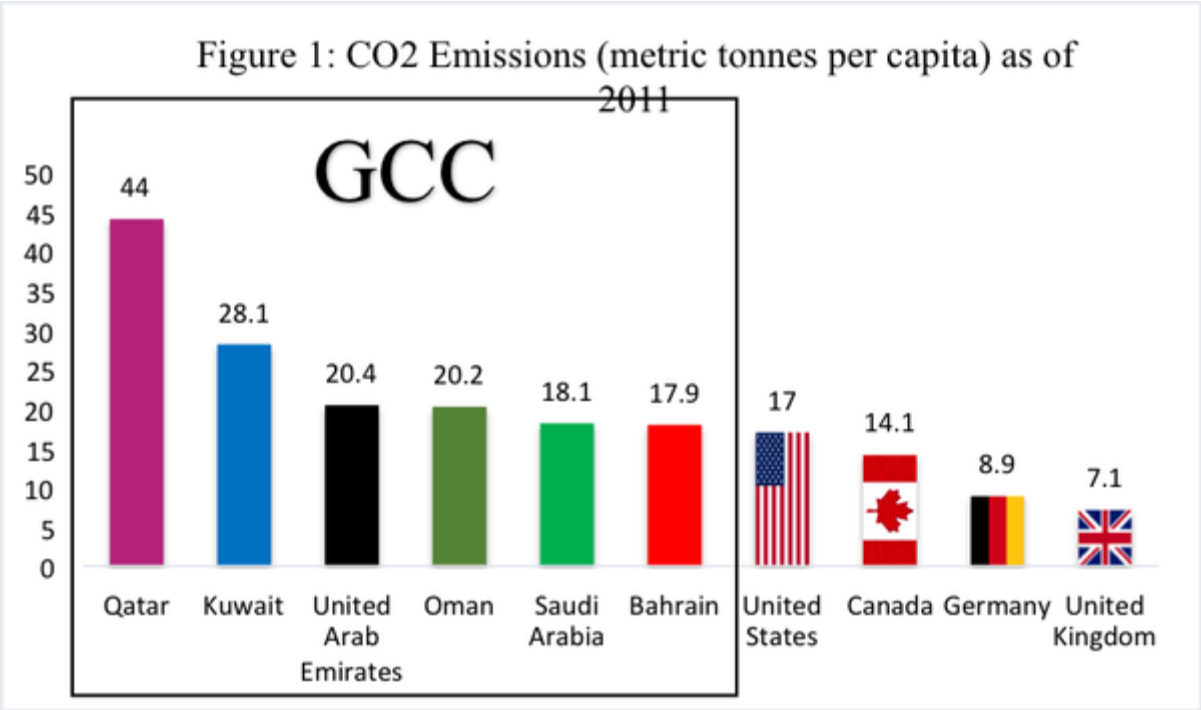
During the last few months, authorities have repeatedly underlined that *the average Saudi* will not suffer from negative impacts of the reforms.

"We don't want to change the life of the average Saudi. We want to exert pressure on wealthy people, those who use resources extensively".[60]

Up to now, Saudi Arabia has raised prices for gasoline, electricity and water, but is clearly going to take more measures to address the problems posed by under-priced fuels.

Inevitably, pollution was another major push-factor for reform, even if further steps are required. Indeed, even without a pronounced industrial identity, the region has per-capita CO2 emissions that exceed some of the world's leading industrial countries.[61]

[59] "Saudi Arabia studies fuel subsidy reform", *The Economist*, October 29, 2015.
[60] V. Nereim, "Saudi Prince Says Kingdom Working to Soften Subsidy Cut Blow", *Bloomberg*, April 18, 2016.
[61] H. al-Hammasi, "Subsidies: the double-edged sword of Saudi Arabia", *Gulf Business*, May 4, 2016.



Source: World Bank

In the framework of the economic renewal and increased awareness, the Kingdom recently launched Vision 2030, an ambitious set of objectives created by the Council of Economic and Development Affairs that is likely to place new emphasis on reforms.[62]

Obviously, the subsidy reform belongs to a broader wave of gradual political renewal, begun with Salman bin Abdulaziz al-Saud, crowned as the new King of Saudi Arabia on January 23, 2015 following the death of his half-brother, King Abdullah.

In fact, the renewal has not been caused by the mere succession to the throne, but by the ascent of one of the King's son, prince Muhammad bin Salman.

At the age of 31, he is the second deputy Prime Minister, the youngest minister of defence in the world and Chief of the House of the royal court.

More significantly, Muhammad is also chair of the Council for Economic and Development Affairs and for this reason, he is often considered the power behind the throne of his father.[63]

Indeed, Prince Muhammad is on the frontline for the cut of subsidies and he also fostered the creation of *Vision 2030* project.

[62] http://vision2030.gov.sa/en.

[63] In addition, insistent rumours claim that the King suffers from dementia, a condition that may furtherly deteriorate his governing capability.

Even though largely capable of keep the wind of the so-called *Arab Springs* out of its borders, since 2011 Saudi Arabia has been experiencing new domestic tensions and a slowly growing internal dissent.

For this reason, it is undeniable that an enlightened, young and energetic prince may help the Kingdom in keeping pace with the current national conditions.

Indeed, even without a full *Arabia Spring*, the period 2011-2012 was characterized by repeated protests, sit-ins and clashed between citizens and security officers.

Many protests over human rights took place in April 2011 in front of government ministry buildings in Riyadh, Ta'if and Tabuk and in January 2012 in Riyadh, mainly demanding release of prisoners detained without charge.

As far as the gender gap is concerned, between 2011 and 2012 thousands of women protested for their right to vote.[64]

Another gender-related issue regards the right to drive, for which Saudi women have been organizing campaigns and protests since many years.

In 2015, the former King Abdullah announced women's participation in the 2015 municipal elections and eligibility as Consultative Assembly members, while nothing seems to be done for their right to drive.

Furthermore, the increasing dissent is apparent also in the realm of art and expression,[65] and the case of Raif Badawi, the activist who created the website Free Saudi Liberals, became known worldwide.[66]

Prince Muhammad, who often claimed that his vision is *a tolerant country with Islam as its constitution and moderation as its method*, will have to answer for these persistent democratic vacuums, not only from an ethic perspective, but also in order to attract credibility on his economic and financial enlightened reforms.

Outlooks

As far as citizens' reception is concerned, the population might reveal a more positive than expected attitude.

More precisely, even if a large part of the citizenship still opposes paying more for energy consumption, the awareness of risks and weaknesses of the subsidised system is increasing.

[64] The major campaign was called *Baladi*, "popular", "national", "homegrown".

[65] For an in-depth analysis of the role of female artists in Saudi Arabia see*: Primavere Rosa. Rivoluzioni e Donne in Medio Oriente*, Libraccio Editore, Milano, 2013.

[66] Badawi was arrested in 2012 and brought to court on several charges, including apostasy. In 2013, he was sentenced to seven years in prison and 600 lashes. In 2014 his sentence was increased to 10 years in prison, 1000 lashes, and a fine.

In other words, the process of acceptance has reached its intermediate level: though still widely opposed, reform is regarded as a necessary and unavoidable measure.

The ASDA'A Burson-Marsteller[67] survey of 3,500 young people in 16 Arab countries found that 78 percent think electricity and fuel should be subsidized by their government and 86 percent agreed in Saudi Arabia.[68]

Nevertheless, Saudis are gradually beginning to develop an embryonic environmental and energy-related consciousness. They are exposed to new messages regarding sustainability, pollution and changes in the social contract patterns.

While the abovementioned embryonic consciousness is largely taken for granted in other regions of the world, it is likely to represent a momentous revolution in the very conception of energy for the Gulf countries.

However, the debate is still underway and it is too early to assess the ultimate consequences of the reform.

In this respect, according to the majority of data and including future cuts, the subsidy restructuring is expected to generate $30 billion a year by 2020, part of a broader plan to raise non-oil revenue by $100 billion to reduce the kingdom's reliance on crude.

The challenge that Saudi Arabia has still to face consists of respecting the unavoidable gradualness of the process without letting it run aground due to the fear of internal discontent.

In order to aid low-earning households more than the richer ones, someone suggested to subsidise other necessities, by using revenues saved from restructured water or energy prices.

While apparently successful in a short-term perspective, this strategy is likely to solve one problem by introducing another one, ultimately creating a vicious cycle.

A more effective solution would imply the implementation of targeted subsidies, which may benefit low-income groups.

A possible counter-argument against this idea claims that, without a standard tax-system and an efficient mechanism of fiscal control, it could be hard to distinguish the rich from the poor, thus individuating who has the right to subsidies.

Nevertheless, this impediment could be easily overcome by establishing the beneficiaries according to consumption instead of the declared income.

[67] Established in 2000, ASDA'A Burson-Marsteller is the region's leading public relations consultancy. Interestingly, it provides the most complete survey on the Arab Youth. The 2016 survey can be found at http://www.arabyouthsurvey.com/en/home.

[68] V. Nereim, "Saudi Prince Says Kingdom Working to Soften Subsidy Cut Blow", *Bloomberg*, April 18, 2016.

By so doing, government should subsidise the first kilowatts each hour or day, leaving the exceeding consumption unsubsidised, and potentially applying an additional tax to a third, higher segment of consumption.

Unquestionably, it will be extremely interesting to analyse the future developments of subsidy reforms not only in Saudi Arabia, but also in the broader Gulf region, also in order to compare a resource-abundant area with the production and consumption patterns now evolving in importing countries of the Middle East and North Africa.

The fiscal, environmental, and welfare impacts of energy subsidy reform are potentially enormous. Eliminating post-tax subsidies in 2015 could raise government revenue by $2.9 trillion (3.6 percent of global GDP), cut global CO2 emissions by more than 20 percent, and cut pre-mature air pollution deaths by more than half. After allowing for the higher energy costs faced by consumers, this action would raise global economic welfare by $1.8 trillion (2.2 percent of global GDP).[69]

In this respect, the following section of the paper will investigate the context of MENA nations that import resources, providing a comparison of the subsidies' management of importing and exporting countries.

In order to highlight similarities and differences, Egypt will be chosen as the second case study, which might corroborate the hypothesis that subsidy reforms are becoming increasingly compelling both in exporting and in importing MENA countries, despite their economic, social, political and historical differences.

3. Importing Countries

As a matter of common knowledge, importing countries show hugely different geopolitical, economic and social characteristics from those of the exporting countries, and the two conjunctures are hardly comparable.

Nevertheless, as in resource-abundant countries, the need for subsidy reform is becoming increasingly urgent and the international pressures have been highlighting the imperative to reform and the many shortcomings of the subsidised system.

3.1 Similarities and differences in comparison to rentier states

As mentioned above, rentier states and importing countries, and more broadly Gulf countries and the other Middle Eastern nations, are extremely different from both an economic and an energetic perspective.

It is undeniable that Egypt and Saudi Arabia, for instance, are hardly comparable.

[69] D. Coady – I. Parry – L. Sears – B. Shang, How Large Are Global Energy Subsidies?, *IMF Working Paper*, International Monetary Fund, Washington, May 2015, p. 6.

Nevertheless, as far as subsidies' effects and consequences are concerned, the two groups of countries show two significant similarities, namely the international pressures towards reform and the mechanism subsidy/low democratic demands.

Speaking about international pressures, the International Monetary Fund (IMF) and the World Bank have repeatedly urged countries to take steps towards credible subsidy reforms.

The International Monetary Fund for instance, has been invoking subsidy reform since more than a decade. In a recent report, it highlights that energy subsidies are dramatically higher than expected and that estimates for global energy subsidies in 2011 have been revised to US $ 4.2 trillion, more than double the US $ 2.0 trillion previously reported in a 2013 IMF book, *Energy Subsidy Reform: Lessons and Implications*.[70]

According to other IMF estimates, pre-tax energy subsidies in the region amounted to $237 billion in 2011, equivalent to 48 percent of world subsidies, 8.6 percent of regional GDP, or 22 percent of government revenue.[71]

Similarly, the World Bank has been underlying the shortcomings of the subsidised systems since years ago, and in 2014 it created a new facility to help countries reform their energy subsidies and put in place social protection measures to help low income citizens during the process, the Energy Subsidy Reform Technical Assistance and Delivery Facility, led by the Bank's Energy Sector Management Assistance Program (ESMAP).

In 2010, long before the implementation of the first reforms in the Middle East, the World Bank gave also some suggestions regarding how to perform the awaited changes. For instance, it stated that the credibility of the government's plan to compensate vulnerable groups is important for public acceptance, as is its plan to use the funds freed from subsidy reform for social and economic benefits.

Furthermore, international institutions highlighted that a well- organized publicity campaign would have been essential.

Governments can reduce uncertainty and persuade the public that the effects will not be as deleterious as might be feared by explaining the need for change and the compensating measures that will be implemented.[72]

Besides these significant data and suggestions, the international organizations have been claiming that, in economies with large energy consumption, the extra demand for energy induced by the

[70] B. J. Clements – D. Coady – S. Fabrizio – S. Gupta – T. Serge Coleridge Alleyne - C. A. Sdralevich, *Energy Subsidy Reform : Lessons and Implications*, IMF Working Paper, International Monetary Fund, Washington, September 2013.

[71] C. Sdralevich – R. Sab – Y. Zouhar – G. Albertin, *Subsidy Reform in the Middle East and North Africa, Recent Progress and Challenges Ahead*, International Monetary Fund, 2014, p. 3.

[72] World Bank, Subsidies in the Energy Sector: an Overview, July 2010: [http://siteresources.worldbank.org/EXTESC/Resources/Subsidy_background_paper.pdf], p. 10.

lower consumer prices can work against energy security and have global effects by possibly raising prices on the world market by increasing demand (in the case of widely traded fuels).[73]

Secondly, energy exporting and importing countries share the self-reinforcing mechanism through which the power provides low fiscal pressure and free or cheap goods, mainly energy, in return for low democratic demands and the tacit acceptance of a repressive political control.

Stated differently, the principle does not really change. What changes is the extent to which governments can exploit it to rule, which is obviously larger in contexts with bigger GDP, smaller numbers of citizens and inhabitants, and stronger economies. Therefore, it will tend to be larger in the exporting/rentier states than in importing countries like Egypt.

3.2 The case of Egypt: el-Sīsī energy policies between past and future

Egypt represents an ideal case study not only because it has a long tradition of subsidies, but also because, since his election, President el-Sīsī has been trying to implement significant reforms of the hugely subsidised system.

Furthermore, the fragile socio-economic equilibrium and the persistent tensions in the country make it possible to observe the complex interaction between socio-political issues and energy subsidy reform.

Egypt has the third-largest population in Africa, after Nigeria and Ethiopia, and the third highest gross national income (GNI), after Nigeria and South Africa.

Egypt's economy suffered during and after the 2011 revolution as the country experienced a sharp decline in tourism revenue and foreign direct investment. According to the International Monetary Fund (IMF), annual gross domestic product (GDP) growth in Egypt dropped from 5.1% in 2010 to 1.8% in 2011 and remained below the pre-revolution level, averaging 2.1% in 2013.[74]

With all probabilities, only financial support from some Persian Gulf countries has helped Egypt meet its domestic energy demand.

Decades ago, in 1977, Egyptian President Anwar al-Sadat attempted to remove the flour, rice and cooking oil subsidies: the result was a near-revolution that saw hundreds of thousands of protesters descend on the capital and the hasty re-implementation of the subsidy system.

Due to similar reactions and the fear of losing popular consent, governments have protected the subsidised system until few years ago, even though the need for reforms was becoming increasingly urgent.

[73] World Bank 2010, p. 13.

[74] International Monetary Fund (IMF), *Subsidy Reform in the Middle East and North Africa. Recent Progress and Challenges Ahead*, Washington D.C., 2014.

Indeed, as far as Egypt is concerned, over the past five years the annual energy production grew on average by 1% compared to annual average consumption growth of 5.3%, thus creating an increasing gap between supply and demand.[75]

Egypt is the largest non-OPEC oil producer in Africa, and the continent's largest consumer of oil and natural gas, which account for 94% of Egypt's primary energy consumption.

Energy demand is increasing rapidly as the result of population growth and the increased demand is posing a challenge for Egypt's government as production of oil and gas is falling, and oil consumption has outpaced production since 2010. Combined with aging infrastructure, this is causing frequent electricity blackouts all over the country.

In 2013, the *annus horribilis* of the Egyptian politics[76], subsidies to fossil fuel consumption accounted for 12% of Egypt's GDP or US$32 billion and absorbed around 20% of public spending (exceeding expenditure on health, education and infrastructure combined), making Egypt the world's eighth largest spender on fossil fuel subsidies.[77]

The high cost of energy subsidies in Egypt has contributed to the country's high budget deficit and the inability of the Egyptian General Petroleum Corporation (EGPC), the country's national oil company, to pay off its debt to foreign operators. EGPC owes foreign oil and natural gas operators billions of dollars, which has led foreign operators to delay their investments in existing and new oil and natural gas projects.

As far as gas is concerned, Egypt is the largest gas consumer in Africa, accounting for 40% of dry natural gas consumption in Africa in 2013.

Much of the natural gas consumed in Egypt is used to fuel electric power plants. Furthermore, the Egyptian government encourages households, businesses, and the industrial sector to consider natural gas as a substitute for petroleum products and coal.

In January 2008, the World Bank approved loans for the Natural Gas Connections Project, which aims to switch consumption of liquefied petroleum gas (LPG) to natural gas through investment in new connections and to further expand natural gas use in densely populated, low-income areas.

Moreover, the share of natural gas consumed in the transportation sector also increased after the development of compressed natural gas (CNG) infrastructure and vehicles.

In this context, Egypt experiences frequent electricity blackouts because of rising demand, natural gas supply shortages, aging infrastructure, and inadequate generation and transmission capacity.

[75] "Egypt's Energy Market: Challenges Creating Opportunities", *Egypt of the Future*, February 18, 2015.

[76] For an account of Egyptian politics in the last few years, see S. Brzuszkiewicz, *The Evolving Geopolitics of North Africa and its Impact on the Energy Markets*, FEEM Press, Fondazione Eni Enrico Mattei, 2016.

[77] S. Whitley – L. Van Der Burg, *Fossil Fuel Subsidy Reform: From Rhetoric to Reality*, Working Paper, the Global Commission on the Economy and Climate, 2015: [http://newclimateeconomy.report/misc/working-papers], p. 57.

Inevitably, ongoing political and social unrest in Egypt has slowed the government's plans to expand power generation capacity by 30 gigawatts by 2020, and now it seems to be a utopian goal.

As far as the motor fuels and LPG are concerned, they are subsidised for general consumption, and natural gas and fuel subsidies are provided to energy-intensive industries in order to promote their competitiveness.

Moreover, expenditure on a variety of fuels accounts for around 70% of total spending on subsidies, and Egypt imports a number of fuel types – including around 50% of the butane, which is widely used in canister form by Egyptian households.

As far as the energy sector is concerned, a further consequence of the political and social unrest begun in 2011 was that the lower security led to a marked increase in illegal butane trading, which in turn resulted in the reduced availability of subsidised stock. The consequent protests, which accompanied each butane crisis, served as a reminder of the politically sensitive nature of the subsidy issue.

Indeed, as in the other MENA countries, the subsidized system proved to favour the economic - and political - élites. In 2013 for instance, the Egyptian Ministry of Petroleum found that 92% of petrol subsidies and 66% of natural gas subsidies went to the richest 20% of consumers.[78]

According to other estimates, Egypt's expenditure on energy subsidies reached a staggering EGP 143.7 billion (close to USD 21 billion) in the financial year 2013/14, a figure representing 19.5 per cent of total government spending, or almost the entire value of aid received by Egypt from Middle Eastern donors since mid-2012.

The following fiscal year, 2014/2015, pushed by the fall in global crude oil prices that was occurring since mid-2014, the cost of oil product subsidies fell to 70 billion Egyptian pounds ($ 9.2 billion) thanks to the subsidy reform.

At the same time, however, electricity subsidies increased and costed 27.4 billion Egyptian pounds ($ 3.6 billion).[79]

In June 2014, the government announced the incumbent reform through a national media campaign aimed at explaining the rationale for the prices increases to citizens.

Even before, right after the fall of Morsi, the military-backed interim government also strongly indicated its intention of implementing subsidy reform. It began a pilot scheme to give "smart cards" to drivers, which they present when buying petrol or diesel at petrol stations—at first for

[78] *Ibid.*

[79] International Institute for Sustainable Development (IISD), *Draft communications strategy to support energy subsidy reform in Egypt: Version II*, 2014.

tracking rather than cost-control purposes.[80] (Farid, 2013; Fick, 2013). The interim government also distributed coupons for butane cooking gas cylinders to holders of ration cards, beginning in January 2014, limiting the number available at the existing, heavily subsidized price (IRIN, 2013). Nevertheless, despite all these tweaks, the prices for all refined products had continued to decline in real terms, pushing the subsidies' cost as a proportion of budget spending up to 22 per cent by 2013—over 30 per cent if the electricity sector is included.

Egypt introduced long-awaited energy subsidy cuts. These had been in the pipeline for over five years, but repeatedly delayed by political instability. Their announcement was therefore seen as a sign of consolidation by the new President, Abdel-Fattah al-Sisi, as well as a positive signal to external investors.

The most significant step was the 64 per cent hike in diesel prices, but similar increases affected electricity and a wide range of refined products—the most notable exclusion being heavily subsidized liquefied petroleum gas (LPG).[81]

Both the Egyptian President and his cabinet presented the reform as a bitter pill[82], calling people to make sacrifice in order to save money for their own country.

What the campaign advertised most was the possibility of a different allocation of the saved money. Indeed, the political establishment repeatedly emphasized that almost half would have been allocated to education and health.[83]

Besides, President's rhetoric presents his mission as a war to rebuild Egypt, which implies that whoever opposes his reforms is not interested in country's fate.

As far as the implementation is concerned, the government has put forward a medium-term macroeconomic policy framework. It covers the fiscal years from 2014/15 to 2018/19, according to which it plans to reduce the fiscal deficit from 12.6 per cent to 8.5 per cent of GDP, and its public debt burden from 97 per cent to within 80 to 85 per cent of GDP, in five years.[84]

In this framework, energy subsidy reform was aimed to play a major role for the fiscal adjustment, and it forecasted compensation mechanisms for vulnerable households involving an expanded cash transfer program.

---

[80] D. Farid, Petroleum ministry kicks off experimental stage of smartcard programme. Daily News Egypt, 2014: [Retrieved from http://www.dailynewsegypt.com/2013/12/02/petroleum-ministry-kicks-off-experimentalstage-of-smartcard-programme/].

[81] L. M. James, *Recent Developments in Egypt's Fuel Subsidy Reform Process*, The International Institute for Sustainable Development (IISD), Winnipeg, April 2015.

[82] Global Subsidies Initiative (GSI) – International Institute for Sustainable Development, *Energy Subsidy Country Update. Assessing Egypt's Energy Subsidy Reform*, August 2014.

[83] After more than two years, it is still difficult to state whether this commitment has been fulfilled or not.

[84] S. Abouleinen – H. El-Laithy – H. Kheir-El-Din, *The impact of phasing out subsidies of petroleum energy products in Egypt*, The Egyptian Center for Economic Studies (ECES), Working Paper no. 145, 2009.

Nevertheless, according to the majority of commentators[85], compensation measures to reduce the impact of the subsidy cuts put in place by the government have so far been extremely limited. Moreover, while beginning to remove some subsidies, government expanded the food subsidy system was expanded, with twenty further products including certain meats, vegetables and dairy products. This was in addition to government distributions of bread, rice, sugar, tea, flour and oil.

The rationale behind this provision implied not touching food subsidies as politically sensitive issues. The government also made some efforts to support the poor and lower middle classes by attempting to restrain public transport costs, with President stating that minibus[86] fares should only increase slightly. In general, however, this is a largely privatized sector over which the government has relatively little control, and independent minibus operators doubled prices immediately following the subsidy cuts—arguably a reasonable response to the sharp increase in costs of diesel and engine oil.

For electricity subsidies on the other hand, the government declared in September 2014 that they would have been removed over the same five-year period, rather than over three years, as previously stated.[87]

Overall, the energy subsidy reforms raised the prices of various energy products, but – according to the insightful analysis carried out by Laura James –they did not alter the fixed basis on which they are set in local currency, which is a key aspect of existing supply chains, including a mix of state-owned and private companies.[88] Consequently, there is still no automatic link to international prices.

Outlooks

From the present analysis, it is clear that Egyptian subsidy reforms belong to a wider set of policies closely intertwined.

Indeed, the first aim of the current administration has been to achieve this recovery through the exploitation of three major fields: further support from the Gulf States, increased foreign investment, including in "mega-projects", and energy subsidy reforms.[89]

[85] N. Rashwan, "Voices from Egypt: How will increased energy price affect you?", *Middle East Eye*, July 6, 2014: [http://www.middleeasteye.net/news/voices-egypt-how-will-new-energy-prices-affect-you-1738307315].

[86] The most common public transports in the major cities.

[87] S. Aggour, "Removal of electricity subsidies to happen over five years", *Daily News Egypt,* 2014: *[*http://www.dailynewsegypt.com/2014/09/09/removal-electricity-subsidies-happen-five-years-electricityminister/].

[88] L. M. James, *Recent Developments in Egypt's Fuel Subsidy Reform Process*, International Institute for Sustainable Development, April 2015, p. 7.

[89] D. Abaza, Suez Canal mega projects to drive economic growth in Egypt, *Ahramonline*, September 16, 2014: [http://english.ahram.org.eg/NewsContent/3/12/110927/Business/Economy/Suez-Canal-mega-projects-to-drive-economic-growth-.aspx].

These three policies are interrelated: Gulf allies would have hesitated to continue to transfer funds into the highly subsidised economy of the country, while potential investors were looking for energy subsidy reforms as an indicator that the administration was determined in its efforts towards an improved economic management.

As in the case of the exporting countries, no reliable consumption data are yet available to show the longer-term impact of the subsidy reforms, but they are unlikely to have been steep enough to contain the long-term rising trend of energy usage in Egypt.[90]

After the reform, the International Monetary Fund expressed its approval for the steps taken, at the same time highlighting the need for further subsidy reforms in the next fiscal years, specifically aimed at keeping expenditure in check, reducing energy supply bottlenecks and raising potential growth, as well as ensuring a stronger social protection.[91]

Anyhow, the new economic path undertaken by the Egyptian President clearly indicates the willingness to improve the relationship between the country and the International Monetary Fund, which would provide a more specific framework for ongoing reform, and would be welcomed as additional assurance by Gulf allies, thus letting them be more inclined to continue providing financial assistance.[92]

Businesses and potential investors will also be looking for evidence of continued commitment. More broadly, continued reform would be imperative to address Egypt's pressing energy supply constraints,[93] thus providing an ongoing source of motivation and possibly enabling the country to repay its debts to international energy companies and sign new contracts.[94]

As far as the future initiatives are concerned, Egypt is also planning to expand its power system interconnection with countries in the Middle East and Africa. Egypt and Saudi Arabia signed a $1.6 billion deal to connect the two countries with a 3,000 MW electricity cable. This project will expand each country's electricity capacity, especially during peak demand times. According to Business Monitor International (BMI) Research, peak demand times are at different times in the two countries. Peak demand times are between noon and midnight in Saudi Arabia and after sunset in Egypt. Consequently, the connection will provide both Saudi Arabia and Egypt with an extra power source to mitigate peak demand shortfalls. The project's construction is expected to be completed in 2018.

---

[90] L. M. James, p. 10.

[91] International Monetary Fund, *IMF Staff Concludes 2014 Article IV Mission to Egypt*, Press Release No. 14/538, 2014: [https://www.imf.org/external/np/sec/pr/2014/pr14538.htm].

[92] D. Butter, Egypt in search of economic direction. Chatham House, November 2013: [https://www.chathamhouse.org/sites/files/chathamhouse/public/Research/Middle%20East/bp_butter1113.pdf].

[93] A. Setouhy, Clear economic vision is big challenge for Egypt in 2015: EFG-Hermes Head of Research. Daily News Egypt, November 26, 2015.

[94] H. Saleh, Egypt issues tender against oil revenues, *The Financial Times*, August 8, 2014.

Regarding alternative energy, Egypt's first solar-thermal power plant, located in Kuraymat - south of Cairo – has been operational since June 2011 with the capacity of generating 140 MW of solar-thermal energy. The plant uses concentrated solar power (CSP) with back-up natural gas-fired generators. The World Bank and the Japan International Cooperation Agency helped finance the construction of the solar-thermal plant. Furthermore, Egypt is planning to build a 140 MW solar power plant along the Red Sea coast and a 100 MW plant in Kom Ombo, so increasing country's solar generation capacity by 3,500 MW by 2027.

Fro both an Egyptian and Italian perspective, a major event that must not underestimated is the discovery by Eni of a supergiant natural gas field in 2015.

In August 2015, Eni announced that it has discovered a "supergiant" natural gas field. The discovery was made about 120 miles off the coast of Egypt, in the company's Zohr prospect, at a depth of nearly 5,000 feet.

According to the majority of studies, it could potentially hold 30 trillion cubic feet of gas within a 100 square kilometer area, making it one of the world's largest natural gas finds, which would probably be able to satisfying Egypt's natural gas demand for decades. This discovery could also provide about 5.5 billion barrels of oil.[95]

For these reasons, it will be extremely interesting to observe how the involved players will reshape the energy sector management of the country and to assess the new attitudes of the Egyptian General Petroleum Corporation (EGPC). It is the national oil company, which is responsible for managing upstream and downstream activities particularly through its main subsidiary, the General Petroleum Company, which holds several exploration licenses in the Sinai, the Gulf of Suez, and the Western Desert.

As the abovementioned discovery clearly shows, international oil companies (IOCs) also play a large role in Egypt's upstream oil sector, holding shares in producing assets in partnership with EGPC. Eni, BP, BG, and Apache are the major oil and natural gas players in Egypt, with the first three primarily invested offshore and Apache in the onshore Western Desert.

[95] M. Addady, "This energy company just found the largest-ever gas field in the Mediterranean Sea", *Fortune*, August 31st 2015: [http://fortune.com/2015/08/31/natural-gas-egypt-eni-zohr/].

Conclusions

During the last decade and after the Arab uprisings in particular, the debate over susidy reforms in the Middle East gained momentum.

Even though after the turmoil the average subsidy spending in the MENA region raised in response to the wave of strengthened social demands, after the first post-revolutionary phase, the increasing awareness of the unsustainability of subsidized systems led several MENA countries to take steps to lower subsidies, especially as far as the energy sector was concerned.

Inevitably, the issue of energy and energy revenues management has been placed side by side with that of the so-called social contract, which includes the processes of creation and legitimization of authority and the response of individuals and societal aggregates.

As the present analysis has showed, the multiple links between energy and power are particularly apparent in the concept of rentier state, the resource-course theories and the comparison between the resource-abundant countries, which export energy, and the importing nations.

For many years, reducing energy subsidies in the MENA region has represented a sort of taboo. For citizens, energy subsidies have served as a key social safety net, while for rulers, they have been used for limiting equality and social justice demands, thus forcing people to comply with the entrenched status quo.

At the same time, Middle Eastern and North African countries were exposed to what has been called international pressure exerted by institutions like the International Energy Agency (IEA), the World Bank and the International Monetary Fund (IMF) to limit national spending for subsidies.

Nevertheless, in the last three years - given the low oil prices - MENA governments have been acknowledging that the subsidised system distorts market trends, fosters inefficient use of resources, depresses foreign direct investment and fuels overconsumption, which is no longer sustainable, particularly as far as the population growth in most of the MENA countries is concerned. Between 2013 and 2014 nearly thirty countries undertook energy sector reforms, among which there are Tunisia, Egypt, Iran, United Arab Emirates, while Saudi Arabia inaugurated projects of reforms in 2015.

Now that oil prices are slowing surging again, it is important for the MENA countries not to abandon the ongoing processes of reform.

Unquestionably, thanks to the rise in prices, Energy companies in the Middle East reduced their borrowing by 26 percent in 2016, as the provided revenues needed for exploration and production.

Moreover, bonds and loans issued by energy producers in the six-nation Gulf Cooperation Council declined 26 percent to $17.5 billion from a record $23.7 billion in 2015.[96]

The key to success will be carrying out reforms even though prices get higher: the low prices of the last few years must well be considered a push factor, but not the only reason to implement change.

However, as explained before, the energy landscape of the Middle East and North Africa is developing quickly, and the developments are not related to subsidy only, but also to other major issues such as the renewable energies, nuclear power and the future partnerships within and outside the region.

Saudi Arabia for instance, the state that better represents the exporting countries, announced at the beginning of the year an investment outlay of up to $50 billion in the short term. Obviously, the country has been struggling with low oil prices and budget deficits plans, and wants to rely more on renewables, emulating the United Arab Emirates.

Saudi Arabia is launching in the next few weeks the first round of bids for a massive

During the recent World Future Energy Summit in Abu Dhabi (16-19 January 2017), Saudi speakers stated that in the next few weeks the Kingdom will be launching the first bid round of massive programme of 10 gigawatts of $30 to $50 billion by 2023, while Some bid rounds will go shortly after that.

At the same time, Saudi Arabia plans to build two nuclear reactors with a total capacity of 2.8 gigawatts.

Perhaps most importantly, Saudi Arabia seems also to be working on an interconnection of renewable energy project that will connect the Kingdom to Yemen, Jordan and Egypt to exchange non-fossil sources of energy.

While this project is undoubtedly interesting, it is hard to deny that Saudi Arabia will not be able to overlook the geopolitical scenarios involving the mentioned country and its relation with them, Yemen *in primis*.

Anyhow, Saudi Arabia is obviously aiming at taking some step forward into their role of energy star in the region. Saudi Arabia's ACWA Power for instance, has recently agreed with the government of Jordan to develop, finance, construct, own and operate a new 61.3 megawatts photovoltaic project in Risha, a province in Eastern Jordan. The project was announced jointly by the Jordanian Minister of Energy and Mineral Resources Ibrahim Saif, and Mohammad Abu Nayyan, Chairman of ACWA Power.

[96] Mohammed Sergie, "Gulf Energy Companies Reduce Borrowing 26% as Oil Prices Surge", Bloomberg, January 2nd, 2017: [https://www.bloomberg.com/news/articles/2017-01-02/gulf-energy-companies-reduce-borrowing-26-as-oil-prices-surge].

Even as far as the importing countries are concerned both the process of reforms and the establishment of new partnership are still ongoing.

In Egypt for instance, in January the Egyptian Electricity Holding Company (EEHC) has signed a $61.68 million deal with South Korea's Doosan Group for the supply of power plant equipment. The deal is expected to include the supply of a 650MW turbine, condensers, and generators for the Assiut power plant, and the project is expected to start at the end of 2019.[97]

At the same time, France plans to provide 175 million euros to finance Egypt's energy sector too.

According to the Egyptian official declarations, 150 million euros of the total funding will be allocated for electricity and 25 million euros for oil.

Among the project discussed were the Alexandria Tram Development Project, the Alexandria West Wastewater Treatment Plant Expansion and Upgrade Project, and the Healthcare Development Program in Egypt's governorates.[98]

In conclusion, assessing the overall impact of subsidy reform would be premature and simplistic. Nevertheless, the first steps – even though not sufficient - have been favourably welcomed by the international institutions.

Similarly, the abovementioned projects of countries like Saudi Arabia and Egypt deserve increasing attention, since the next few years will represent a fundamental phase of the energy reconfiguration within the region.

[97] Egypt signs $61.1m Deal with South Korea, *Africa's Power Journal*, January 18, 2017: [https://www.esi-africa.com/news/egypt-signs-61-6m-deal-with-south-korea/].

[98] "France to provide 175 mln euros to fund Egypt's energy sector", *Ahramonline*, December 27, 2016: [http://english.ahram.org.eg/NewsContent/3/12/253952/Business/Economy/France-to-provide--mln-euros-to-fund-Egypts-energy.aspx].

References

S. ABOULEINEN – H. EL-LAITHY – H. KHEIR EL-DIN, *The impact of phasing out subsidies of petroleum energy products in Egypt*, ECES Working Paper 145, 2009.

K. ABU ISMAIL – N. SARANGI, A new approach to measuring the middle class: Egypt. Economic and Social Commission for Western Asia (ESCWA), 2013: [http://www.escwa.un.org/information/pubaction. asp?PubID=1494].

M. ADDADY, "This energy company just found the largest-ever gas field in the Mediterranean Sea", *Fortune*, August 31st, 2015: [http://fortune.com/2015/08/31/natural-gas-egypt-eni-zohr/].

H. AL-BEBLAWI – G. LUCIANI, *The Rentier State*, London, Croom Helm, 1987.

H. AL-BEBLAWI – G. LUCIANI, "The Rentier State in the Arab World", in G. Luciani, *The Arab State*, London, Routledge, 1990.

F. ALVAREDO – T. PIKETTY, Measuring top incomes and inequality in the Middle East, Economic Research Forum Working Paper No. 832, 2014.

L. ATTALAH, "The cost of lifting fuel subsidies. Mada Masr, August 11, 2014: [http://www.madamasr.com/en/2014/08/11/feature/economy/the-cost-of-lifting-fuel-subsidies/].

G. BAHGAT, "Preliminary assessment of Arab Spring's Impact on oil and gas in Egypt, Libya", *Oil & Gas Journal*, January 9, 2012.

G. BAHGAT, "The Impact of the Arab Spring on the Energy Sector: Opportunities and Risks", *The World Financial Review*, November 16, 2012.

K. BENES – A. CHEON – J. URPELAINEN – J. YANG, *Low Oil Prices: an Opportunity for Subsidy Reform*, Center on Global Energy Policy, Columbia University, New York, 2015.

E. BERGASSE – W. PACZYNSKY, The Relationship Between Energy and Economic and Social Development in the Southern Mediterranean, *MEDPRO Technical Report No. 15*, Centre for European Policy Studies, Brussels, 2012.

F. BLANC, Energy Efficiency: Trends and Perspectives in the Southern Mediterranean, *MEDPRO Technical Paper No. 21*, Centre for European Policy Studies, Brussels, 2012.

T. BOERSMA – S. GRIFFITHS, *Reforming Energy Subsidies: Initial Lessons from the United Arab Emirates*, Brookings – Masdar Institute, Abu Dhabi, January 2016.

M. CAMPANINI, *Storia del Medio Oriente*, Bologna, Il Mulino, 2010.

M. CAMPANINI, *Storia del Medio Oriente contemporaneo*, Bologna, Il Mulino, 2014.

B. J. CLEMENTS – D. COADY – S. FABRIZIO – S. GUPTA – T. SERGE COLERIDGE ALLEYNE - C. A. SDRALEVICH, *Energy Subsidy Reform: Lessons and Implications*, IMF Working Paper, International Monetary Fund, Washington, September 2013.

D. COADY – I. PARRY – L. SEARS – B. SHANG, *How Large Are Global Energy Subsidies?*, IMF Working Paper, International Monetary Fund, Washington, May 2015.

CORDEN, W. Max., "Booming Sector and Dutch Disease Economics: Survey and Consolidation", *Oxford Economic Papers* 36 (3): 359–380, 1984.

H. DARBOUCHE – B. FATTOUH, *The Implications of the Arab Uprisings for Oil and Gas Markets*, The Oxford Institute for Energy Studies, 2011.

DOBBS ET AL., "Reverse the Curse: Maximizing the potential of resource-driven economies", *McKinsey Global Institute Report*, December 2013.

EGYPTIAN MINISTRY OF FINANCE, *Medium-Term Macroeconomic Policy Framework*, FY 2014/15 – FY 2018/19, 2014.
EGYPTIAN MINISTRY OF PETROLEUM, *Egypt Energy Price Schedule*, July 2014.

L. EL-KATIRI – B. FATTOUCH, *A Brief Political Economy of Energy Subsidies in the Middle East and North Africa*, OIES Paper: MEP 11, Oxford Institute for Energy Studies, Oxford, 2015.

L. EL-KATIRI – B. FATTOUH – R. MALLINSON, *The Arab Uprisings and MENA Political Instability: the Implications for Oil & Gas Markets*, OIES Paper: MEP 8, Oxford Institute for Energy Studies, Oxford, 2014.

A. EVIN – M. HAFNER – S. TAGLIAPIETRA, "Perpetuating the Rentier State: Patrimonialism in a Globalized World", *The Rentier State at 25: Dismissed, Revised, Upheld?*, The Gulf Research Meeting 2013, University of Cambridge, Cambridge, 2013.

GLOBAL SUBSIDIES INITIATIVE (GSI) –INTERNATIONAL INSTITUTE FOR SUSTAINABLE DEVELOPMENT, Energy Subsidy Country Update. Assessing Egypt's Energy Subsidy Reform, August 2014.

M. GRAY, *A Theory of Late-Rentierism in the Arab State of the Gulf*, Center for International and Regional Studies, Georgetown University, Washington, 2011.

P. GRIFFIN – T. LAURSEN – J. ROBERTSON, *Egypt: Guiding Reform of Energy Subsidies Long-Term*, Policy Research Working Paper n. 7571, World Bank, Washington, Feb 2016.

G. GROENEWOLD – J. DE BEER, "Population Scenarios and Policy Implications for Southern Mediterranean Countries, 2010-2050", MEDPRO Policy Paper n. 5, Centre for European Policy Studies, Brussels, 2013.

M. HAFNER – S. TAGLIAPIETRA – H. EL-ANDALOUSSI, "Outlook for Oil and Gas in Southern and Eastern Mediterranean Countries", MEDPRO Report n. 18, Centre for European Policy Studies, Brussels, 2012.

M. HAFNER – S. TAGLIAPIETRA, "A New Euro-Mediterranean Energy Roadmap for a Sustainable Energy Transition in the Region", *MEDPRO Policy Paper n. 3*, Centre for European Policy Studies, Brussels, 2013.

INSTITUT THOMAS MORE, "Towards a Sustainable Security in the Maghreb: An opportunity for the region, a commitment for the European Union", Institut Thomas More, Brussels, 2010.

INTERNATIONAL MONETARY FUND, Subsidy Reform in the Middle East and North Africa. Recent Progress and Challenges Ahead, International Monetary Fund, Washington D.C., 2014.

J. JABBRA, *Bureaucracy and Development in the Arab World*, E.J. Bill, Leiden, 1989.

L. M. JAMES, *Recent Developments in Egypt's Fuel Subsidy Reform Process*, The International Institute for Sustainable Development (IISD), Winnipeg, April 2015.

KRUGMAN, P. R., "The Narrow Band, the Dutch Disease, and the Competitive Consequences of Mrs. Thatcher", *Journal of Development Economics* 27: 41–55, 1987.

G. LUCIANI – R. FERROUKHI (eds.), *The Political Economy of Energy Reform: the Clean Energy-Fossil Fuel Balance in the Gulf States*, Gerlach Press, Berlin.

H. MAHDAVY, "The Pattern and Problems of Economic Development in Rentier States: The Case of Iran", in M.A. Cook, *Studies in the Economic History of the Middle East*, Oxford, Oxford University Press, 1970.

OGJ Editors, "Saudi Arabia, UAE lead GCC subsidy reform", *Oil & Gas Journal*, Jan 11, 2016: [http://www.ogj.com/articles/2016/01/saudi-arabia-uae-lead-gcc-subsidy-reform.html].

A. PEGELS, *Green Industrial Policy in Emerging Countries*, London, Routledge, 2014.

A. PRASAD – H. ABDEL MONEM – P. GARCIA MARTINEZ, Macroprudential Policy and Financial Stability in the Arab Region, *IMF Working Paper*, May 2016.

I. Y. QASEM, *Neo-rentier theory: the case of Saudi Arabia*, Doctoral Thesis, Leiden University, 2016.

M. ROSS, *The Oil Curse: How Petroleum Wealth Shapes the Development of Nations*, Princeton and Oxford, Princeton University Press, 2012.

C. SDRALEVICH – R. SAB – Y. ZOUHAR – G. ALBERTIN, *Subsidy Reform in the Middle East and North Africa, Recent Progress and Challenges Ahead*, International Monetary Fund, 2014.

M. AL-SUBAIEY, *Qatarization Policy – Implementation Challenges*, Brookings Doha Center, Doha, 2014.

THE ECONOMIST INTELLIGENCE UNIT, "Saudi Arabia Studies Fuel Subsidy Reform", *The Economist*, Oct 29, 2015: [http://www.eiu.com/industry/article/1633636747/saudi-arabia-studies-fuel-subsidy-reform/2015-11-04].

UNEP, "Reforming Energy Subsidies. Opportunities to Contribute to the Climate Change Agenda", United Nations, New York, 2008.

U.S. Energy Information Administration, Algeria, International energy data and analysis, Report, February 5, 2014.

U.S. Energy Information Administration, Tunisia, International energy data and analysis, Report, October 2015.

U.S. Energy Information Administration, Egypt, International energy data and analysis, Report, June 2, 2015.

U.S. Energy Information Administration, Morocco, International energy data and analysis, Report, September 2015.

G. VIDICAN, “Building Domestic Capabilities in Renewable Energy – A Case Study of Egypt”, German Development Institute, Bonn, 2012.

S. WHITLEY – L. VAN DER BURG, *Fossil Fuel Subsidy Reform: From Rhetoric to Reality*, Working Paper, the Global Commission on the Economy and Climate, 2015: [http://newclimateeconomy.report/misc/working-papers].

WORLD BANK, “MENA Economic Developments and Prospects: Investing in Turbulent Times”, World Bank Middle East and North Africa Region, Economic Developments & Prospects, World Bank, Washington, 2013.

NOTE DI LAVORO DELLA FONDAZIONE ENI ENRICO MATTEI

Fondazione Eni Enrico Mattei Working Paper Series

Our Note di Lavoro are available on the Internet at the following addresses:

http://www.feem.it/getpage.aspx?id=73&sez=Publications&padre=20&tab=1
http://papers.ssrn.com/sol3/JELJOUR_Results.cfm?form_name=journalbrowse&journal_id=266659
http://ideas.repec.org/s/fem/femwpa.html
http://www.econis.eu/LNG=EN/FAM?PPN=505954494
http://ageconsearch.umn.edu/handle/35978
http://www.bepress.com/feem/
http://labs.jstor.org/sustainability/

NOTE DI LAVORO PUBLISHED IN 2017

SAS	1.2017	Anna Alberini, Milan Ščasný: The Benefits of Avoiding Cancer (or Dying from Cancer): Evidence from a Four-country Study
ET	2.2017	Cesare Dosi, Michele Moretto: Cost Uncertainty and Time Overruns in Public Procurement: a Scoring Auction for a Contract with Delay Penalties
SAS	3.2017	Gianni Guastella, Stefano Pareglio, Paolo Sckokai: A Spatial Econometric Analysis of Land Use Efficiency in Large and Small Municipalities
ESP	4.2017	Sara Brzuszkiewicz: The Social Contract in the MENA Region and the Energy Sector Reforms