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**Energy rules harmonization in the Euro-Mediterranean area  
between external pressures for rules change and domestic  
institutional restraints.  
The case of independent regulatory agencies**

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**By**

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I wish to thank dr. Roberto Vigotti and dr. Matteo Urbani, of the OME - Observatoire Méditerranéen de l'Energie, electricity division, for their support in promoting the above mentioned survey. This thesis includes a work in progress co-authored with OME researchers. Specifically, the section 1.2 of the first chapter, is part of the OME Report "The Institutional Framework of the Electricity Industry in SEMCs and the Euro-Med energy policies", to be published in Autumn 2012. this section has been revised in agreement with dr. Matteo Urbani, OME Electricity Division.

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## **Abstract**

The research has a double objective. Firstly, to investigate the degree of rules harmonization between the two shores of the Mediterranean Sea, one of the main objective pursued by the EU external action in the field of energy. Secondly, to analyze current developments of the regulatory framework and the role of regulatory agencies of Mediterranean countries with regards to electricity and renewables. In doing so, the thesis has been organized into an introductory chapter and three specific chapters focusing on EU rules promotion methods and the perception of EU action by Mediterranean regulators (chapter 2); the institutional endowment of southern Mediterranean countries (chapter 3); role and independence of regulatory agencies for the energy sector in Northern Africa and Middle East countries (chapter 4).

## **Chapter 2 (co-authored with Prof. Carlo Cambini)**

Rules harmonization is one of the features characterizing regional integration processes. This paper analyse such dynamics with regards to the Euro-Mediterranean area and the energy sector. The study pays attention to three main criteria that have characterized the EU domestic process of energy sector liberalization, which are promoted in the Southern Mediterranean neighbourhood through EU cooperation programmes and networking initiatives. These criteria are the sector's unbundling, the definition of TPA regime, and the establishment of National Independent Regulatory Authorities. In doing so, three pressures for rules promotion and change are assessed in a comparative way through a perception survey directed at regulatory authorities from four Southern Mediterranean countries: Algeria, Jordan, Egypt, and Turkey. These cases have been selected because of their relevance in terms of energy sector restructuring and energy exchanges, being relevant producers and transit countries. Moreover, with the exception of Turkey, candidate to EU membership, the countries selected are involved in EU cooperation programmes and policies since mid 1990s. All of them, thus, are under both EU top-down and EU indirect, mainly network based, pressures for rules change. The case of network governance here considered is the MedReg. Among the modes of governance considered, the indirect pressure seems, considering our results, the weakest one.

## **Chapter 3**

The aim of the paper is the identification of existing restraints on regulators' discretion, and limits to changing the regulatory system, as may be derived by the analysis of Constitutions, fundamental laws, and anecdotic evidences on the political life of southern Mediterranean countries. In the Annex to the paper, a description of the methodology adopted and variables defined is given. The institutional background that emerge from the analysis has been considered in the analysis on the role and independence of energy regulatory agencies in the southern Mediterranean countries.

## **Chapter 4 (co-authored with Prof. Carlo Cambini)**

The paper analyses the existing regulatory framework for the electricity and renewables sectors, and the role of regulatory agencies in Northern Africa and Middle East countries, under the promotion by the European Union. Using data collected through an original survey directed at regulators, ministry departments and energy companies of the southern Mediterranean, the study is aimed at assessing the extent of agencies' independence looking at three main dimensions of independence: regulatory instruments available to regulators and decision making autonomy; regulators' organizational autonomy; regulators accountability. Results show that those countries having established an independent regulator have a more credible regulatory framework than those countries in which such body does not exist. In particular, the analysis shows that Turkey, Croatia and Jordan have defined a regulatory framework that limits administrative expropriation and, consequently, creates an environment more suitable for attracting investments in the electricity and renewables sector. On the institutional ground, this is probably related with the harmonization of regulatory standards promoted by the European Union through the neighbouring policy, for the Jordan case, and the membership perspective, in the Turkish and Croatian case.



## Chapter 1

### Rules harmonization in the Euro-Mediterranean area.

#### 1. Introduction

The objective of this research is twofold: to investigate the degree of energy rules harmonization between the two shores of the Mediterranean Sea, and to analyze current developments of the regulatory framework of southern and eastern Mediterranean countries with regards to the electricity and renewables sector. In doing so, the first aspect considered in the study is the pressure of the European Union (EU) for rules harmonization in the Mediterranean region. Although the missing exclusive competences on energy, and external relations, the role of the Union as “regulatory power” (Majone, 1997) abroad emerges by those initiatives and programmes directed at promoting a model of “functional” integration based on energy market integration and shared regulatory standards.

The first dimension of the study is the effectiveness of the EU as rules promoter in the neighbourhood. Starting from 1995, the year of the Euro-Mediterranean Partnership, rules harmonization is at the base of the promoted process of regional integration as it develops till 2011. The study, thus, assesses the EU rules promotion looking mainly at the degree of *adoption* and *implementation*, by Middle East and Northern Africa (MENA) countries, of EU regulatory standards for the electricity sector. Specifically, being independent regulatory agencies (IRAs) one of the features that characterizes the EU domestic regulation for utilities, the research assesses the extent of adoption of IRAs model by southern Mediterranean countries. Firstly, the effectiveness of the EU pressures for rules change is investigated (paper 2). By virtue of an external rules promotion largely based on the domestic experience, the development of the European *acquis communautaire* on energy have been considered. Three core aspects of energy sector restructuring, and market integration, have been taken as the main dimensions on which the EU pressure for rules change is measured: the mentioned establishment of IRAs; the unbundling of utilities’ industry; the



definition of third party access (TPA) regime and incentive tariff system. Two modes of external pressure for rules change have been considered: hierarchy and network. The former referring to EU directly managed initiatives of cooperation, the latter being the case of networks of governance supported by the EU. A third competitive pressure played by domestic actor (bottom-up pressure) is also taken into account. The methodology of analysis chosen is a perception survey measuring regulatory performance (OECD 2012), directed at officers of existing IRAs in four MENA countries: Algeria, Egypt, Jordan and Turkey.

Secondly, the degree of adoption and implementation of promoted standards of regulation by MENA countries is assessed. Thus, the second dimension of the study is the institutional endowment (North 1990) of MENA countries taken as necessary, but exogenous, factor allowing rules change. With this regard, the research follows the methodology by Levy and Spiller (1994) and analyses how judiciary independence, counterbalancing executive-legislative powers, and veto players external to the political arena affect regulatory restraints (paper 3). Constitutions and fundamental laws, as well as anecdotic evidences on the political life of ten MENA countries, have been taken as the main sources of information for this part of the analysis. After having detected the main variables of interest, we grouped them in six categories: state regime; restraints on regulators' discretion written in the regulatory system; restraints on changing regulatory systems, formal or substantial; judiciary independence; countries' stability; and countries' investment profile. Then, a first description of the energy, electricity mainly, sector is provided including existing regulatory restraints.

The third, and last, dimension considered in this research is the current development of the electricity and renewable framework of regulation in the region, and the independence of regulatory agencies. A literature review on the rationale behind agencies' establishment and independence from the political power is provided. Subsequently, the extent of agencies' independence, as well as the existing electricity and renewable regulatory framework, is analysed through a survey directed at regulatory agencies and energy companies of the

Mediterranean region (paper 4). Agencies' independence has been defined in terms of decision making powers; organizational autonomy; and accountability measures.

To conclude this introductory chapter, the following paragraphs clarify the rationale behind the study: the degree of inter-dependence within the Mediterranean region in terms of increasing energy needs of both shores of the Mediterranean Sea (1.1) and Euro-Mediterranean policies and programmes of cooperation on energy (1.2).

In the end, a description of the organization of the thesis, is provided.

### **1.1 Euro-Mediterranean energy *inter-dependence***

The main assumption at the base of this study is that the Mediterranean region is characterized by energy inter-dependence, which involves both the northern and the southern and eastern shores of the Mediterranean Sea. Such inter-dependence is in this section described in terms of energy needs - energy demand and exchange - as well as needs for a shared regulatory framework directed at improving resources potentials of the south, including renewables<sup>1</sup>.

Energy consumption by southern Mediterranean countries will increase in the next 20 years by 70%, relying at 87% on fossil fuels (European Commission, 2007). The energy demand in the southern Mediterranean is expected to rise of 2% per year to reach 1.405 million tonnes oil equivalent (Mtoe) (OME 2011). In OME scenario, the southern Mediterranean countries account for "33% of the region's energy demand today" (OME 2011, p.31), which may expand to 47% in 2030. In order to satisfy such increase, reforms of the sector are required.

On the northern shore of Mediterranean, energy dependency from abroad increases. The EU is depending for energy provisions mainly from outside supplies. The International Energy Agency (IEA),

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<sup>1</sup> Developing the study, the author is aware that inter-dependence should be considered in terms of security and stability at both regional, the Mediterranean widely understood, and sub-regional, Mashreq and Maghreb, level. With this regard, security aspects have been conceived as exogenous to our study and reference to them are given only when necessary for the study on regulatory harmonization processes.

comparing the level of energy imports from IEA members of 1973 with the values registered in 2008, identifies Italy, France and Spain, among EU countries, as those suffering the highest level of dependency from gas, natural gas and coal imports. The same report qualifies Denmark as the sole net exporters (IEA 2009). Analysing the EU energy dependency since 1998, the Eurostat Pocketbook (2010), stresses the constantly increasing level of dependency<sup>2</sup>, shown in the Table 1. For the electricity sector, the Netherlands, with Italy, registered the highest imported values. On the contrary, France was the largest net exporter of electricity among EU Member States. The level of dependency reached in 2008 the 84.3 % for oil, and the 62.3 % for gas, two of the main energy sources imported by the EU. Southern EU members' dependency from gas import increased in the period 1998 - 2008. Portugal and Greece recorded a six fold and fivefold increase in their net imports of gas, mainly due to low penetration of natural gas back in 1998, and Spain and Italy, two of the top importers in the EU members, presented a threefold and twofold increase and their share of total EU natural gas imports reached 36% in 2008 (Eurostat 2010). The Table 2 refers to the import of natural gas in the EU by main country of origin. Despite the most sensitive growth was registered for Russia, both for oil and gas, Algeria and Libya confirmed to be the main exporters among Mediterranean countries, with increasing values for Libya (26 % in the 2000 – 2008 period); while Egypt emerged as a new and strong exporter in the last few years.

The data provided for the EU and MENA countries confirm the two shores of the Mediterranean being reciprocally dependent: the EU depending for energy supplies, while MENA countries are depending from the EU in terms of market, for their energy products, technology and financial resources for new infrastructures. The Table 3 stresses the gas import from the MENA region ordering, for each main country of origin, those of destination; it reveals the existing strong dependency of the EU by exporters in the Mediterranean region. Coming to the oil sector, Libya confirmed as the main source of import from the southern

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<sup>2</sup> The energy dependency indicator assesses “the extent to which an economy relies upon imports in order to meet its energy needs. The indicator is calculated as net imports divided by the sum of gross inland energy consumption” (<http://ec.europa.eu/eurostat> , March 2011)

neighbourhood (Table 4). These data are also confirmed when looking in detail at southern neighbouring countries (Table 5).

With regard to the MENA region, Algeria Libya and Egypt are, since 1990s, the main country of origin for energy imports for the EU Mediterranean members mainly.

The last tables provide a short summary of the energy production by MENA countries, import and export values. These data are interesting considering the analysis of the current organization of the sector, with special attention to electricity and renewable. Considering the energy primary production, it rapidly increased in the last few years, in coincidence with the need for the European importing countries to find alternative sources to imports from Russia. Moreover, the increased values registered should be regarded as the result of growing interests of Asiatic emerging powers for Mediterranean and Middle East energy resources. Data show the growing relevance of energy exports (Table 7) compared to the imports for countries like Syria and Egypt, the latter confirming as *the country with the third largest oil and gas reserves in the Mediterranean*" (OME 2011). The role of Algerian resources is also confirmed. Data between growing exporters and persistence of net importer countries is also evident when looking at the energy import by country (Table 8). Morocco and Israel are those countries registering higher level of imports compared to the other countries; while, the situation of Palestinian Territory requires, in our opinion, more detailed data.

Summarising, the EU energy dependency will rest for a long and should be considered under the light of a changing world in which, new powers, like China and India, and development countries, are increasing their demand and changing the relevance that old and "new" energy producers may have (IEA 2009). Furthermore, the increasing level of energy demand by MENA countries, concentrated in the industrial and residential sectors, is part of a development process that cannot be ignored. As recent people uprisings in the region show, the need to assure equal access to economic resources is pivotal to the stability of the region, and to the northern energy security too, more than long lasting authoritarian leaders. Thus, considering the potentials of the renewables sector too, the Mediterranean area is intended

becoming ever more relevant. The Euro-Mediterranean relations and cooperation on rules for the establishment of a common energy area and “a free energy trade zone” thus, require new efforts in favour of a more coordinated response to energy challenges.

The following section delineates the development of the Euro-Mediterranean policy since 1990s. It provides the framework for the analysis of the evolution of the EU action as rules promoter, progresses done, and perspectives for future change.

## **1.2 The Euro-Mediterranean energy policy and the process of regional integration<sup>3</sup>**

One of the core elements of the EU action in the neighbourhood is the establishment of strong partnerships with the neighbouring countries on the base of shared and harmonized rules for sectoral cooperation. With regards to energy, this approach clearly emerges when looking at the way the EU–MENA cooperation addresses issues regarding the electricity sector regulation, markets integration, cross-border infrastructure investments and electricity trade. Since the 1990s, when the EU foreign policy was defined for the first time and partnership initiatives towards the Mediterranean countries have been adopted, the action pursued has been directed at creating conditions for energy market integration, by mirroring the process of domestic market harmonization on the EU external action. Association of regulators at EU and neighbouring countries level, EU Member States, stakeholders such as the energy industry and the civil society organizations, all of them have unanimously agreed on the relevance of creating a shared regulatory framework, viewed as the milestone for implementing common projects in the field of energy efficiency, renewables and security of supply. The objective is the establishment of an effective integration, based on shared interests of the actors involved, allowing the EU to overcome domestic limits in energy sector (not yet under its exclusive competences), and permitting the MENA to be considered as

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<sup>3</sup> “Institutional context: energy policies, regional institutions, financial organizations and schemes”, in: OME Report, *The Institutional Framework of the Electricity Industry in SEMCs and the Euro-Med energy policies*, , chapter 2, paragraph 1 (publication forthcoming).

active interlocutors of the projects to be implemented. In order to describe how the energy policies towards the Mediterranean have been defined during the time, this chapter highlights the evolution of the EU energy policy towards the southern neighbouring countries; initiatives and programmes adopted are examined together with results achieved starting from 1995 till to the present moment.

### *1.2.1 The European energy policy and the Mediterranean region: evolutionary process and future perspectives*

The EU energy policy with regards to the neighbouring countries has been described as non-unique policy, showing “*continuous tension between the EU’s lack of competence over energy imports (27 separate policies with external energy suppliers) versus its supranational competence on commercial relations with third countries (single trade actor)*” (Hadfield 2009, p.3). Being a young international actor, with growing competences in international affairs, the EU reacted to the missing exclusive competences in the energy field by promoting international initiatives mainly based on market integration and common standard regulation, considered two essential aspects for enhancing cooperation. The 1990s are considered as crucial years for the consolidation of the EU role on energy both, at domestic and international level. If the latter refers to first projects for partnership building, the former refers to the approval of first directives for energy market (electricity and gas). In this period, EU competences on energy market integration are affirmed and the Internal Energy Market (IEM) structure progressively defined, providing elements characterizing the Euro-Mediterranean energy cooperation.

Having regards to the southern neighbouring countries, in the 1990s the EU extended the principles of the IEM through a policy promoting the definition of an Energy Charter Treaty for the South. Directed at encouraging free trade and economic integration, and favouring the necessary political cooperation for the security of energy supplies, the Treaty was never signed. In 1994, the European Council in Essen confirmed the role that the Euro-Mediterranean coordination should have in order to assure effectiveness to investment projects, and in 1995 the Barcelona declaration (1995) launched the Euro-

Mediterranean Partnership.

### *1.2.2 From the Euro-Mediterranean Partnership (EMP) to the European Neighbourhood Policy (ENP)*

The Euro-Mediterranean Partnership (EMP) has constituted the central framework for relations between the EU and its Southern Mediterranean partners for over ten years. In the 1990s, the EU started to draft a new Mediterranean policy, which was finalized at the Barcelona Conference, on November 1995. As result, the “Barcelona Process”, or the Euro-Mediterranean Partnership, was launched with the main objective of attaining long-term stability in this region, including all the EU Member States, as well as Turkey, Algeria, Morocco, Tunisia, Egypt, Syria, Israel, Jordan, Lebanon and the Palestinian Authority; Albania and Mauritania joined at the beginning of November 2007; Libya has had observer status since 1999.

The EMP initiative lays the foundations of a proposed new regional relationship, by establishing three main objectives:

- Definition of a common area of peace and stability by reinforcing political and security dialogue, and by promoting political values, good governance and democracy (*Political and Security Basket*).
- Construction of a zone of shared prosperity through an economic and financial partnership and the gradual establishment of a free-trade area, including the Association Agreements on the bilateral level (*Economic and Financial Basket*).
- Rapprochement between peoples through a social, cultural and human partnership aimed at encouraging understanding between cultures and exchanges between civil societies (*Social, Cultural and Human Basket*).

The economic basket, which includes the project for a Euro-Mediterranean Free-Trade Area (EMFTA) to be established in 2010, as well as financial cooperation and concerted actions in the field of economic development, embraces also the cooperation on energy issues, proving the relevance of a progressive convergence on market regulation, since the very beginning of the Euro-Mediterranean policy.

Consequently, considering market as the main area in which the EU had full competences, energy market integration was identified as the method chosen for managing the energy integration between European and MENA countries.

In 2004, the European Union enlargement brought two more Mediterranean countries (Cyprus and Malta) into the Union, while adding a total of 10 to the number of Member States. Today, the Euro-Mediterranean Partnership comprises 44 members (27 European Union Member States, and 16 partner countries: Albania, Algeria, Bosnia and Herzegovina, Croatia, Egypt, Israel, Jordan, Lebanon, Mauritania, Monaco, Montenegro, Morocco, the Palestinian territories, Syria, Tunisia and Turkey) promoting an articulated regional dialogue which aims, among the other things, at carrying out a number of bilateral activities, such as the Euro-Mediterranean Association Agreements, that the EU negotiates with the Mediterranean Partners individually, reflecting on them general principles governing the new Euro-Mediterranean relationship.

Regional dialogue represents one of the most innovative aspects of the EMP, covering at the same time political, economic and cultural fields within a cooperative logic. This cooperation has a considerable strategic impact as it deals with problems that are common to many Mediterranean Partners, emphasizing regional complementarities and cross-border synergies. The multilateral dimension, which supports and complements bilateral actions taking place under the Association Agreements, has been strengthened, since 2004, by including Mediterranean Partners in the European Neighbourhood Policy (ENP), supported by the funding instrument MEDA, replaced in 2006 by the European Neighbourhood and Partnership Instrument (ENPI), which represents the new financial scheme designed within the framework of the ENP.

### *1.2.3 The European Neighbourhood Policy and the evolutionary integration process.*

The EMP has represented an innovative project “based on the principles of joint ownership, dialogue and co-operation”, which had to make the Mediterranean a “region of peace, security and shared



*prosperity*” (Barcelona Declaration 1995). In this regard, the novelty of the EMP has been to present a well structured policy framework for the cooperation with the southern neighbouring countries in which the partnership and all funded projects were developed. Although energy was not the core element of the EMP project, there is no doubt that promoting a model for restructuring the economic sector in a more competitive way favoured a certain regulatory culture to spread, and common problems as well as visions for future energy cooperation to bring out. In the post-Barcelona environment, the role of the EU as integrated energy market strengthened, also considering progresses within the Union, testified by the adoption of two other packages of directives<sup>4</sup> in the first decade of 2000, aiming at fostering the IEM, by enhancing regulatory competences and consolidating the model of regulation the EU promotes outside its borders. Since then, the external dimension of the energy policy has been considered in several documents of the EU, as the Communication *“On the development of Energy Policy for the Enlarged EU, its Neighbours and Partner countries”* (European Commission 2003b), which addresses roles and values of the energy partnership when creating a wider market based on common rules and principles. In this regard, the EMP value for north-south energy market integration as well as energy infrastructure projects, have been defined relevant also in terms of security of supply, and in 2004, the ENP has been launched including Partner Countries participating in the Barcelona Process, thus complementing and reinforcing the EMP on a bilateral basis, through Action Plans that should contribute to cross-border cooperation<sup>5</sup>.

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<sup>4</sup> The Second Energy Package (Directive 2003/54/EC and Directive 2003/55/EC, concerning respectively the electricity and gas markets), and the Third Energy Package (Directive 2009/72/EC and Directive 2009/73/EC, concerning respectively the electricity and gas markets, and repealing the former Directives).

<sup>5</sup> Cf. European Commission, 2004, Communication on Proposals for Action Plans under the European Neighborhood Policy (ENP), 09. 12. 2004, COM (2004) 795 final. Besides, As stated in the conclusions of the European Council held in Gaer the 14 June 2004, the Action Plans *“(…) should be based on common principles but be differentiated, as appropriate, taking into account the specificities of each neighbor, its national reform processes and its relations with the EU. Action plans should be comprehensive but at the same time identify clearly a limited number of key priorities and offer real incentives for reform. Action plans should also contribute, where possible, to regional cooperation”*

The ENP, approached by some scholars not only *"as a new EU policy, but also as a reflection of some deeper transformations on (...) governance in the wider Europe"* (Crombois 2007), has its roots on the vision of the European Commission based on the conviction that *"over the coming decade and beyond, the Union's capacity to provide security, stability and sustainable development to its citizens will no longer be distinguishable from its interest in close cooperation with the neighbours"*, in order to *"promote stability, security and sustainable development both within and without the EU (...) to develop a zone of prosperity and a friendly neighbourhood – a 'ring of friends' - with whom the EU enjoys close, peaceful and co-operative relations"* (European Commission 2003a). In this regard, on March 2006, the Green Paper *"European Strategy for Sustainable, Competitive and Secure Energy"* (European Commission 2006a) confirmed the value of the regional approach to energy cooperation, revising also the instruments for the Euro-Mediterranean cooperation by establishing, among the other things, the ENPI. Furthermore, a document addressed to the European Council, and jointly signed in 2006 by the European Commission, the Secretary General, and the High Representative for foreign relations, suggested the adoption of a legal framework for the external energy policy in which the problem of energy security had to be discussed in a *"coherent (backed up by all Union policies, the member states and industry), strategic (fully recognising the geopolitical dimensions of energy-related security issues) and focused (geared towards initiatives where Union-level action can have a clear impact in furthering its interests) way"* (European Commission/ Secretary General /High Representative 2006, p.3). The need of assuring to the foreign energy strategy consistency with the EU's foreign policy objectives has been then confirmed and in this regard, the document suggested the constitution of *"networks of energy correspondents"*, including representatives from the European members, the Commission, and the Secretary General, in order to *"monitor energy security in relevant producer countries, and develop analysis and action plans"*. Regarding the neighbourhood, this text envisaged the need to give particular emphasis on the implementation of the energy-related provisions of the ENP Action Plans, and strengthen the bilateral energy cooperation with important producer and transit partners in North Africa, while at

regional level a gradual convergence towards market opening, fair competition, as well as environmental protection and safety had to be pursued. Nevertheless, the Network of Energy Security Correspondents, established in 2007, involved only projects on the EU eastern borders, leaving for the moment the southern shore of the Mediterranean without such a form of coordination.

In 2007, the Communication *“An Energy Policy for Europe”* reconfirmed energy as a relevant issue for the European economic growth, also considering the potential evolution of its relations with foreign partners, adding to energy also climate change and renewables started to be promoted, by affirming the need to speak with one single voice in pursuing, within 2010, the definition of *“network of countries around the EU, acting on the basis of shared rules or principles derived from the EU energy policy”* (European Commission 2007, p.18). Therefore, on March 2007, the European Council adopted the view of an energy policy, integrated with a climate change strategy, that should *“increase security of supply, ensure the competitiveness of European economies and the availability of affordable energy, and promote environmental sustainability and combating climate change”* (European Council 2007, p. 12). These objectives have been following translated in the EC document on the 2020 initiative adopted in 2010. Having regards to the neighbouring countries, the Council referred to the ENP Action Plans as tools for *“enhancing energy relationships with Algeria, Egypt and other producing countries in the Mashreq/Maghreb region”* (European Council 2007, p.12), and on December 2007, the 5<sup>th</sup> Euro-Mediterranean Ministerial conference agrees on a six-year Action Plan for energy cooperation aimed at creating *“a common Euro-Mediterranean energy market”*. In the same year, the project of the Union for Mediterranean (UfM) was launched by the French President Nicholas Sarkozy. The UfM, can be defined as *“an international, inter-governmental organization including states linked by weak institutional ties (the non EU states) and a group of states brought together by strong supranational institutional ties (the EU)”* (Aliboni and Ammor 2009).

Adopted in 2008, the UfM is a multilateral partnership that encompasses 43 countries from Europe and the Mediterranean Basin: the 27 member states of the European Union and 16 Mediterranean

partner countries from North Africa, the Middle East and the Balkans. Created to re-launch the Euro-Mediterranean Partnership, the UfM is considered as the southern regional cooperation branch of the European Neighbourhood Policy with the aim of promoting stability and prosperity throughout the Mediterranean region<sup>6</sup>. At the Paris Summit, the 43 Heads of State and Government from the Euro-Mediterranean region presented the Union as a new phase of the Euro-Mediterranean Partnership with new members and an improved institutional architecture in order to *"enhance multilateral relations, increase co-ownership of the process, set governance on the basis of equal footing and translate it into concrete projects, more visible to citizens. Now is the time to inject a new and continuing momentum into the Barcelona Process. More engagement and new catalysts are now needed to translate the objectives of the Barcelona Declaration into tangible results"* (Paris Declaration 2008, p.11). Moreover, the Paris Declaration states that contributions for the Union for the Mediterranean will have to develop the capacity to attract funding from *"the private sector participation; contributions from the EU budget and all partners; contributions from other countries, international financial institutions and regional entities; the Euro-Mediterranean Investment and Partnership Facility (FEMIP); the ENPI"*, among other possible instruments (Paris Declaration 2008, p.12). In this regard, the European Commission contributes to the Union for the Mediterranean through the European Neighbourhood Policy Instrument (ENPI), by allocating financial resources to several areas of action, such as the de-pollution of the Mediterranean basin, the establishment of maritime and land highways in order to connect ports and improve rail connections so as to facilitate movement of people and goods, and a Mediterranean solar energy plan that explores opportunities for developing alternative energy sources in the region. The European Investment Bank (EIB) contributes through its Facility for Euro-Mediterranean Investment and Partnership (FEMIP), which brings together the whole range of services provided by the EIB to assist the economic development and the integration of the Mediterranean partner countries; and through the InfraMed

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<sup>6</sup> Nevertheless, its 2009 and 2010 Summits could not be held due to the stalemate of the Arab-Israeli peace process after the Gaza war.

Infrastructure Fund, established in June 2010 by five financial entities (the French Caisse des Dépôts, the Moroccan Caisse de Dépôts et de Gestion, the Egyptian EFG Hermes, the Italian Cassa Depositi e Prestiti and the European Investment Bank) in order to resources of equity financing for infrastructure projects across the region.

While the EMP and the ENP hardly contributed to the regulatory convergence so far promoted, the UfM has been differently perceived, having introduced a novel approach to the Euro-Mediterranean relations; the focus on technical issues of cooperation and the relevance of functional integration approach being directed at *"circumvent through a more functional approach the endemic macro-political obstacles that have traditionally impeded the advancement of co-operation in the region"* (Darbouche 2011, p. 195).

With this regard, the new focus on interests based approach to energy relations with European southern neighbouring countries appears in several documents of the EU referring to energy in the framework of a wider foreign policy. In particular, the Second Strategic Energy Review (2008) stresses the relevance of the Euro-Mediterranean coordination in new infrastructure projects for reducing the EU energy dependency by diversifying sources of energy supply. Infrastructures' improvements are thus required for completing the *"Mediterranean energy ring, linking Europe with the Southern Mediterranean through electricity and gas interconnections to improve energy security and to help develop the vast solar and wind energy potential"* (European Commission 2008a, p. 2). Besides, in 2010 Communication on Energy 2020, confirmed the need for a common policy directed at strengthening energy partnerships with the neighbouring countries, focusing both on the role that market integration could have in guaranteeing the EU security of supply, on one side, and on the promotion of growth in new, increasing energy demanding areas of the southern shore of the Mediterranean, on the other side (European Commission 2010). The priority actions identified in the 2020 document follow this logic:

- The integration of energy markets and regulatory frameworks with the neighbours mainly through the extension of the

Energy Community Treaty<sup>7</sup> to other south-eastern countries, and extending the internal market *acquis* to the energy sector.

- The establishment of privileged partnership with key countries, extending principles of the Energy Charter Treaty<sup>8</sup> such as the freedom of transit, transparency, safety, and investment opportunities, as well as compliance with international law.

As affirmed in the conclusions of the European Council held in Brussels the 4 February 2011, the European Union has to pursue the extensions of the internal energy market rules, deepening the Energy Community Treaty experience and extending it to other neighbouring countries in the south. In this regard, the EU-Member States' coordination is required in order to ensuring consistency and coherence in the EU's external relations with key producer, transit, and consumer countries; coordination being pivotal to the successful implementation of all external initiatives in the field of energy policy. Besides, the Council invited the Commission to submit by June 2011 a communication on *"security of supply and international cooperation aimed at further improving the consistency and coherence of the EU's external action in the field of energy"* (European Council 2011, p. 3). The Communication by European Commission on security of supply and international

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<sup>7</sup> The Energy Community Treaty, signed on October 2005 and entered into force on July 2006, pursues the aim of creating a single regulatory space among countries taking part on it. It links the EU to Albania, Bosnia-Herzegovina, Croatia, the Former Yugoslav Republic of Macedonia, Montenegro, Serbia and the United Nations Interim Administration Mission in Kosovo pursuant to the United Nations Security Council Resolution 1244. Georgia, Moldova, Norway and Turkey are observers, while Ukraine signed the agreements on September 2010. The main tool of the Energy Community Treaty is the implementation of key parts of the EU legislation.

<sup>8</sup> The Energy Charter Treaty and the Energy Charter Protocol on Energy Efficiency and Related Environmental Aspects were signed in December 1994 and entered into legal force in April 1998. To date, the Treaty has been signed or acceded to by fifty-one states, the European Community and Euratom (the total number of its members is therefore fifty-three). The Treaty was developed on the basis of the 1991 Energy Charter. Whereas the latter document was drawn up as a declaration of political intent to promote energy cooperation, the Energy Charter Treaty is a legally-binding multilateral instrument. The fundamental aim of the Energy Charter Treaty is to strengthen the rule of law on energy issues, by creating a level playing field of rules to be observed by all participating governments, thereby mitigating risks associated with energy-related investment and trade.

cooperation has been published on the 7 September 2011, and represents an important cornerstone of the EU external energy policy. First of all, what emerge from this document is that past experience proved that bilateral energy relations between individual Member States and third supplier, or transit countries, can result in a fragmentation of the internal market rather than a strengthening of the EU's energy supply and competitiveness. In this regard, the regulatory framework which has been progressively put in place at the EU level entails important consequences towards partner countries such as in the field of network access, safety and competition provisions. Since the last Communication from the Commission on external energy relations adopted in 2006, the political and legal frameworks for EU energy policy have been transformed. The Lisbon Treaty set out clear objectives for the EU energy policy, further developed in the Europe 2020 strategy, but it is evident that the EU cannot reach these objectives without adequately addressing the external dimension. As the European Commission underlines in the 2011 Communication, the EU must build on the strength of its market, expanding links between the European energy network and neighbouring countries and creating a wider regulatory area, beneficial for all. Recent examples have demonstrated the merits of such European approach and the Council has recognized the need for new initiatives to develop mutually beneficial energy partnerships with key players on all subjects of common interests, including energy security, investments in sustainability and environmental protection, low-carbon technologies, energy efficiency and nuclear safety. In this regard, the aforementioned Communication proposes concrete ways to extend energy cooperation beyond the mere physical security of imports, by proposing an external energy policy with the following priorities:

- Building up the external dimension of the European internal energy market both, by establishing a mechanism for increased transparency and information exchange on Member States' bilateral energy agreements with third countries, and by negotiating EU-level agreements with third countries where necessary in order to achieve the EU core objectives, for example to facilitate large-scale infrastructure projects.

Furthermore, regarding the Mediterranean area, the promotion of cooperation on renewable energy projects with the Southern Mediterranean countries is highlighted, notably in the framework of the Mediterranean Solar Plan, with the launching of pilot solar plant projects in 2011-2012, and by proposing to partners a regional EU-Southern Mediterranean Energy Partnership initially focused on electricity and renewable energy market development in these countries by 2020, and aiming at encouraging third countries to implement ambitious energy efficiency and renewable energy policies.

- Strengthening partnerships for secure, safe, sustainable and competitive energy, by increasing focus in all dialogues on good energy governance and investment, sustainable energy and energy efficiency.
- Improving access to sustainable energy for developing countries, by mobilizing regional level action, particularly in Africa, to reform legal and regulatory frameworks with a view for creating market based conditions that attract private sector investments and enhance regional power trade; and also by mobilizing more resources from EU development assistance to catalyze investment projects both, at the small scale for increasing access to energy services in rural areas, and at a larger scale for improving energy competitiveness and security through interconnections and major generation projects. Besides, this access improvement requires support schemes and financing instruments to the specific needs of the sector, by privileging capacity development and technology transfer, including through research and innovation, stimulating decentralized renewable power production, promoting private initiatives and maximizing the local added value.
- Better promoting EU policies beyond its borders, by ensuring an active EU participation and leading role in the global energy governance debate, through its regular presence in relevant international energy initiatives and frameworks.

Such as indicated in the Communication, the EU energy policy is based on the threefold objectives of security of supply, competitiveness and



sustainability, and external dimension plays a crucial role for all of them. However, a consistent and well coordinated external energy policy is essential not only to the completion of the internal market and the delivery of key policy targets, but also for enhancing the regional cooperation, especially in the Mediterranean area where energy synergies and complementarities represent a significant potential that should be better exploited in order to obtain mutual benefits.

The history of the EU external energy policy definition, with regards to the southern neighbouring countries, shows that the outcomes achieved, as well as the foreign energy policy, still need to be assessed. Firstly, scholars doubt of the effectiveness of the EU action. Some of them define as non-existent the external dimension of EU energy policy because of Member States' divergent interests and the persistence of national sovereignty on energy supply decisions (Andoura and Végh 2009). In this regard, at first the external energy policy is defined as a policy that lacks effectiveness considering the constitutional limits to the EU foreign actions and competences on energy, as well as the consequent missing EU bargaining power at international level (Checchi et al. 2009). Secondly, the difficult integration of security of supply, market liberalization, and environmental issues further limits the external projection of the energy policy. Thirdly, the promoted partnerships have been strongly criticized with regards to the potential impact that the promotion of the sectoral governance may have on the partner countries' good governance and rule of law. However, despite these critical aspects, today the EU focuses more on the external dimension of energy, especially since a domestic energy market is almost defined. In this regard, instead of a pure rules promotion of the EU model, approaches directed at the definition of EU-MENA shared regulation of energy aspects should be recommended, also considering that common interests in managing current and next challenges exist, as the renovating interests in renewable energies proves.

### 1.3 Research design and Thesis structure

This study analyse the effectiveness of the EU action as rules promoter in the energy sector taking into consideration EU pressures for rules change, and the two dimensions of rules adoption and implementation by MENA countries. With this regard, the EU methods for the external rules diffusion, on one hand, and the MENA countries energy sector organization, and their institutional background, on the other hand are the main dimensions of the study.

The study develops on a two-level analysis method, thus. The model of two-level analysis was theorized by Putnam (1988) with regards a government and its double position, as domestic and international actor, in order to explain how domestic and international politics are interlinked and reciprocally influence actors' behaviour. When a government is constrained by domestic actors, the action at the two levels is limited; on the contrary, a government that is autonomous can play at both levels (Matlárý, 1997). In this study, the EU action at international level is conceived as the case of a government constrained by the domestic environment, with regards both the energy sector and the policy towards Mediterranean neighbours, considering the limits to EU external competences. The neighbouring countries' position may, indeed, be conceptualised as the one of governments characterized by strong executives, lacking democratic institutions, and limited statehood (Risse and Lehmukuhl 2006).

The analysis mainly refers to the electricity sector. The countries analysed in the period 1990 – 2010 are Algeria, Morocco, Tunisia, Egypt, Lebanon, Libya, Jordan, Syria, Israel, and Turkey. The last essay reported in the thesis also includes data on Croatia, one of the next members of the EU; this allows to extend our considerations on EU as rules promoter when the leverage of membership perspective is at work, such as in the Croatian and Turkish cases. The thesis collects a series of works dedicated to the analysis of the newly established regulatory agencies for the energy sector in the MENA region, current trends in the electricity sector and renewables, and the role of the EU as rules promoter. The study takes into consideration processes of rules harmonization between the two shores of the Mediterranean Sea; rules

harmonization being the necessary step for solving energy inter-dependency problems between northern and southern Mediterranean countries.

The first paper - **Hierarchy vs Networks. Regulators' perception of EU methods for rules promotion** - reports the results of a perception survey directed at those Mediterranean countries which responds to the following criteria: have established an independent regulatory agency for the energy sector, have participated to EU cooperation initiatives on energy in the period 1990 – 2010, are part of the EU funded *Association of the Mediterranean regulators for electricity and gas* (MedReg). The survey was directed at investigating the perception, by Mediterranean regulators, of the EU and EU-based network of cooperation as rules promoter and the effectiveness of pressures for rules change as identified by the literature on the EU external governance. Findings from the perception survey show the relevance of the EU direct pressure compared to the network one.

Going deep in to the analysis of MENA countries, the second essay reports the study of the **Institutional Background of Southern Mediterranean countries: the exogenous factors affecting both current energy regulation and potentials for regulatory changes**. On the base of the methodology by Levy and Spiller (1994), the aim of the paper is the identification of the following dimensions:

- restraints on regulators' discretion written in the regulatory system;
- restraints on changing regulatory systems, formal or substantial;
- independent judiciary.

With this regard, MENA countries' institutional background is examined considering Constitutions and fundamental laws for those countries not having a written Constitution; anecdotic evidences concerning the political life of concerned countries; judiciary-political power relations. A first description of the electricity sector for the examined countries is also provided on the base of the existing literature. In the Annex to the paper, a description of the methodology adopted and variables defined is given.

The institutional background that emerge from the analysis has been

considered in the analysis on the role and independence of energy regulatory agencies in the southern Mediterranean countries.

The third and last work - **Independent Regulatory Agencies and Rules Harmonization for the Electricity Sector and Renewables in the Mediterranean Region** - uses data collected through an original survey directed at regulators by agencies, ministry departments and energy companies of the southern Mediterranean, the study is aimed at assessing the extent of agencies' independence looking at three main dimensions of independence: regulatory instruments available to regulators and decision making autonomy; regulators' organizational autonomy; regulators accountability. Results show that those countries having established an independent regulator have a more credible regulatory framework than those countries in which such body does not exist. In particular, the analysis shows that Turkey, Croatia and Jordan have defined a regulatory framework that limits administrative expropriation and, consequently, creates an environment more suitable for attracting investments in the electricity and renewables sector. On the institutional ground, this is probably related with the harmonization of regulatory standards promoted by the European Union through the neighbouring policy, for the Jordan case, and the membership perspective, in the Turkish and Croatian case.

## Tables

**Table 1** EU 27 Energy dependency by all products (%)

Years	1998	2000	2005	2006	2007	2008
Values	46.1	46.8	52.6	53.8	53.1	54.8

**Source:** Eurostat pocketbook, Energy, Transport and Environment indicators 2010

**Table 2** Gas Import into the EU-27 (in TJ, terajoules)

Origin	2000	2001	2002	2003	2004	2005	2006	2007	Share 2007(%)
Russia	4539 709	4421 515	4554 744	4895 252	4951 044	4952 879	4937 711	4685 365	40,8
Norway	1985 231	2136 379	2601 569	2699 473	2801 723	2671 779	2844 237	3061 751	26,7
Algeria	2203 075	1957 181	2132 477	2158 803	2042 137	2256 826	2132 236	1943 976	16,9
Nigeria	172 020	216 120	217 882	335 929	410 260	436 319	563 905	588 317	5,1
Libya	33 442	33 216	25 536	30 390	47 809	209 499	321 150	383 615	3,3
Qatar	12 443	27 463	87 952	80 414	160 170	195 713	232 721	275 496	2,4
Egypt						202 419	327 394	221 305	1,9
Trinidad and Tobago	36 334	24 498	19 120	1 365		29 673	163 233	104 917	0,9
Other Origin	112 810	199 256	125 425	100 023	313 245	409 387	227 147	213 995	1,9
<b>Total</b>	<b>9095 064</b>	<b>9015 628</b>	<b>9764 705</b>	<b>10301 649</b>	<b>10726 388</b>	<b>11364 494</b>	<b>11749 734</b>	<b>11478 737</b>	<b>100,0</b>
Mio Cubic meters	240 610	238 509	258 326	272 530	283 767	300 648	310 840	303 670	

**NOTE:** Gross calorific value of 1 million cubic meter of Natural Gas can vary between 37.5 and 42.5 terajoule

**Source:** Eurostat, data updated to May 2011

**Table 3** Imports (by country of origin) of gas, annual data in Terajoules (Gross calorific value = GCV)

Origin	Destination	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000
Turkey	EU (27)	35323	16727	0	0	0	0	0	0	0	0
	Greece	35323	16727	0	0	0	0	0	0	0	0
Algeria	EU (27)	1867044	2000109	1945792	2132236	2256826	2042137	2158803	2132477	1957182	2203075
	New EU MS (10)	11303	12343	13662	13460	17189	16620	16772	15182	15712	15258
	Greece	21519	39885	36319	24098	17788	18601	22528	20367	20210	20294
	Spain	513626	558928	546332	471929	609182	587007	565396	514858	406273	433743
	France	306152	303286	312356	293945	309486	232641	391146	419653	402278	406598
	Italy	863727	990295	936650	1049617	1046378	976579	935774	920420	930135	1071372
	Portugal	80906	82436	59536	85964	112022	97138	100816	109956	93143	82351
	Slovenia	11303	12343	13662	13460	17189	16620	16772	15182	15712	15258
	Slovakia	0	0	0	0	0	0	0	0	0	0
Libya	EU (27)	379882	398006	383615	321150	209499	47809	30390	25536	33216	33442
	Spain	30581	21921	31533	28085	38316	27959	30390	25536	33216	33442
	Italy	349301	376085	352082	293065	171183	19850	0	0	0	0
Egypt	EU (27)	274465	226955	221305	327394	202419	0	0	0	0	0
	Greece	10033	0	0	0	0	0	0	0	0	0
	Spain	182093	186572	169042	191692	142389	0	0	0	0	0
	France	61445	40383	45959	90828	60030	0	0	0	0	0
	UK	20894	0	6304	44874	0	0	0	0	0	0

Source: Eurostat, data updated to May 2011

**Table 4** Crude oil imports into the EU-27 (in Mio tonnes )

Origin	2000	2001	2002	2003	2004	2005	2006	2007	Share 2007(%)
Russia	112,4	136,8	154,7	170,8	188,9	188,0	189,6	185,3	34,0
Norway	115,9	108,1	103,1	106,4	108,6	97,5	89,1	84,3	15,5
Libya	45,5	43,8	39,2	45,9	50,0	50,6	53,2	55,5	10,2
Saudi Arabia	65,1	57,5	53,1	61,5	64,5	60,7	51,1	39,5	7,2
Other, Middle East	54,7	48,3	43,2	27,8	28,5	30,0	32,5	34,4	6,3
Iran	35,5	31,4	25,9	34,7	35,9	35,4	36,4	34,1	6,2
Kazakhstan	9,9	9,1	13,4	15,9	22,2	26,4	26,8	18,3	3,4
Nigeria	22,4	25,7	18,4	23,2	14,9	18,6	20,2	15,5	2,8
Other Origin	58,3	62,3	64,2	56,6	56,6	66,2	66,0	78,1	14,3
<b>Total Imports</b>	<b>519,8</b>	<b>523,0</b>	<b>515,3</b>	<b>542,9</b>	<b>570,1</b>	<b>573,4</b>	<b>564,7</b>	<b>545,0</b>	<b>100,0</b>
in Million barrels	3794	3818	3761	3963	4162	4186	4122	3979	

**Source:** Eurostat, data updated to May 2011



**Table 5 Imports (by country of origin) - oil - annual data, Thousands of tonnes**

Origin	Destination	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000
Turkey	EU (27)	779	239	904	29	271	170	0	0	0	213
Algeria	EU (27)	8539	14563	10433	14351	20181	19129	16207	14157	14716	16717
Tunisia	EU (27)	2228	2152	2206	1231	1335	1344	1684	1664	1176	1346
Libya	EU (27)	47047	56400	54388	51698	50373	49988	45949	39081	43755	45517
Egypt	EU (27)	5141	4313	3208	3739	1716	3952	3460	3811	3600	5579
	New EUMS (10)	0	0	0	0	0	0	0	0	0	112
Syria	EU (27)	6842	6954	7944	7481	9027	9081	12945	20587	19396	13259

Source: Eurostat data updated to May 2011

**Table 6 Energy primary production per country. All products.**

Country	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007
Algeria	:	:	:	:	:	:	170594,54	179740,78	176628,88	176458,76
Egypt	:	:	:	:	:	:	62440,07	77009,51	79101,82	82655,05
Morocco	:	:	134	140	137,6	186,3	781,38	741,73	770,27	759,81
Tunisia	:	:	:	:	:	5220,4	5506,66	5593,88	5270,66	6488,88
Israel	422	523,5	637,2	668,7	703,6	733,8	1992,14	2450,36	3120,44	3120,44
Jordan	132	218	289,8	283,6	268,5	291,4	290,53	252,39	286,66	272,56
Lebanon	:	:	:	:	98	:	228,77	223,66	194,96	187,49
Palestinian Territory	:	:	:	:	194	226	240,8	227,28	193,17	206,62
Syria	:	:	:	:	:	:	31418,9	26920,73	25683,53	24346,2

Source: MEDSAT, data extracted on March 2011

**Table 7** Energy exports per country. All products.

Country	2004	2005	2006	2007
Algeria	138815,61	144390,63	139258,13	136970,88
Egypt	23359,76	21492,57	23427,79	27081,12
Morocco	1441,36	1378,27	1164,81	1272,63
Tunisia	4049,97	4129,61	3683,73	4996,65
Israel	3853,18	4010,65	3860,24	3860,24
Jordan	0,27	:	1,09	15,14
Syria	13496,35	12261,41	9334,39	8919,86

Source: MEDSTAT, data extracted on March 2011

**Table 8** Energy Import per country. All products.

Country	2004	2005	2006	2007
Algeria	1433,03	1082,38	1264,34	1924,88
Egypt	7079,99	6290,37	7329,65	12044,55
Morocco	12734,98	13911,63	13999,45	15027,97
Tunisia	5961,72	5921,78	5982,07	6323,7
Israel	22932,88	23778,32	22526,88	22526,88
Jordan	6288,32	7010,03	6913,99	7344,28
Lebanon	5129,79	4634	4522,85	3779,29
Palestinian territory	1079,59	1332,85	1153,59	1190,72
Syria	4008,41	5745,53	5779,2	7919,4

Source: MEDSTAT, data extracted on March 2011



## References

Aliboni R., Ammor F. M., 2009, "Under the Shadow of 'Barcelona': from the EMP to the Union for the Mediterranean", EuroMeSCo 77.

Andoura S., Végh C., 2009, "Framework Note – Energy Project", Notre Europe, [www.notre-europe.eu](http://www.notre-europe.eu).

Barcelona declaration adopted at the Euro-Mediterranean Conference - 27-28/11/95 <http://europa.eu/scadplus/leg/en/lvb/r15001.htm>

Bicchi F., 2011, "The Union for the Mediterranean, or the Changing Context of Euro- Mediterranean Relations", *Mediterranean Politics*, 16 (1), pp. 3 - 19.

Checchi A., Behrens A., Egenhofer C., 2009, "Long-Term Energy Security Risks for Europe: A Sector-Specific Approach", CEPS Working Document N. 309.

Crombois J., 2007, "The European Neighbourhood Policy and the EU Actions in the Field of Conflict Management: Comparing Eastern Europe and the Maghreb", ECPR General Conference, TURIN.

Darbouche H., 2011, "Third Time Lucky? Euro-Mediterranean Energy Co-operation under the Union for the Mediterranean", *Mediterranean Politics*, Vol. 16 (1), pp. 193-211.

DIRECTIVE 2009/28/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC.

European Commission, 2003a, Communication on Wider Europe, Neighbourhood: A New Framework for Relations with our Eastern and Southern Neighbours.

European Commission, 2003b, Communication On the development of Energy Policy for the Enlarged EU, its Neighbours and Partner countries, COM (2003) 262 final, Brussels

European Commission, 2006a, Green Paper European Strategy for Sustainable, Competitive and Secure Energy, COM(2006) 105 final, Brussels

European Commission, 2006b, External energy relations – from principles to action, COM (2006) 590 final, Brussels

European Commission, 2007, Communication An Energy Policy For Europe, Brussels, 10.1.2007, SEC(2007) 12.

European Commission, 2008a, *Statistical Pocketbook 2007-2008*, Brussels

European Commission, 2008b, An EU Energy Security and Solidarity Action Plan, 2<sup>nd</sup> Strategic Energy Review.

European Commission, 2010, Energy 2020, A strategy for competitive, sustainable and secure energy, COM(2010) 639/3, Brussels,

European Commission, 2011a, The EU Energy Policy: Engaging with Partners beyond Our Borders, COM (2011) 539 final, Brussels.

European Commission, 2011b, EU energy strategy in the southern Mediterranean.

European Commission, Secretary General, High Representative 2006, An External policy to serve Europe's energy interests, S160/06

European Council, 2007, Presidency Conclusions, Brussels, 2 May, 72241/1/07 REV 1 CONCL 1.

European Council, 2008, Presidency Conclusions, Brussels, 14 March, 7652/08 REV 1 CONCL 1.

European Council, 2011, Presidency Conclusions, Brussels, 4 February, PCE 026/11

Eurostat pocketbook, 2010, Energy, Transport and Environment indicators

Final Statement on UfM, Marseille, 3-4 November 2008

[http://ec.europa.eu/external\\_relations/euromed/index\\_en.htm](http://ec.europa.eu/external_relations/euromed/index_en.htm)

Hadfield A., 2009, "The New Politics of North Africa-EU Energy Trade" Chatam House.

International Energy Agency, 2009, Scoreboard

Joint Declaration of the Paris Summit for the Mediterranean, Paris, 13 July 2008.

Jonathan Walters Sector Manager, 2010, "Energy and Transport Middle East and North Africa World Bank", presentation at EU Ministerial Meeting, Brussels.

Levy B., Spiller P.T., 1994, "The institutional foundations of regulatory commitment: a comparative analysis of telecommunications regulation", *Journal of Law, Economics & Organization*, 10 (2), pp. 201-246.

Majone G., 1997, "From the positive to the regulatory state: causes and consequences of changes in the mode of governance", *Journal of Public Policy*, 17(2), pp. 139-167.

Matlary J. H., 1997, *Energy Policy in the European Union*, Palgrave MacMillan, London.

MEDREG Action Plan 2011 – 2013.

North D., 1990, *Institutions, Institutional Change and Economic Performance*. Cambridge: Cambridge University Press.

Observatoire Méditerranéen de l'Energie, 2011, *Mediterranean Energy Perspectives Egypt*, OME (eds), Nanterre France

Putnam R. D., 1988, "Diplomacy and Domestic Politics: The Logic of Two-Level Games", *International Organization*, 42 (3), pp. 427-460.

Risse T.K., Lehmkuhl U., 2006, *Governance in Areas of Limited Statehood – New Modes of Governance?*, SFB-Governance Working Paper Series, 1.

Union for the Mediterranean, 2010, *Experts meeting on the Mediterranean Solar Plan* Brussels, February.

## Chapter 2

# Hierarchy *vs* Networks. Regulators' perception of EU methods for rules promotion<sup>9</sup>

## 1. Introduction

The paper analyzes the perception of the European Union (EU) rules promotion in the energy field by four Middle East and Northern Africa (MENA) countries: Algeria, Egypt, Jordan and Turkey. The Mediterranean region, currently at the centre of renovating interests on electricity and renewables, is involved in EU regional integration projects, with rules convergence as one of the main objectives to achieve. Our case studies represent a good sample of the MENA population: they are related to the EU by partnership building programs and, in the Turkish case, by membership perspectives. The sample includes relevant countries as energy producers and energy corridors for both EU–MENA relations (i.e.: Algeria and Turkey) and at intra-MENA level (Egypt). They are representative of all regimes of the region (Presidential, Algeria; Semi-Presidential, Egypt; Parliamentary, Turkey; Monarchy, Jordan). All of them are at the centre of investment projects for renewable energy. Finally, they have consolidated relationships with the EU: Turkey, a candidate country to EU membership since 1987, is gradually adopting and implementing the *acquis communautaire* on energy. Thus, Turkey is directly subject to the EU direct pressure for rules adoption and implementation. With regards to Egypt and Jordan, both countries joined the Euro-Mediterranean Partnership (EMP) since 1995. Currently, the two countries are taking part in the European Neighbourhood Policy (ENP) and in the Union for the Mediterranean (UfM). Association Agreements (AAs) between these countries and the EU entered into force in 2002 for

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Jordan, and 2004 for Egypt. On the base of AAs, bilateral Action Plans (APs) identify actions to be implemented, as well as financial resources. In the Algerian case, although participating in EU initiatives, a bilateral AP is missing.

The paper investigates the perception of the EU action by regulatory authorities of MENA countries. The effectiveness of the EU as rules promoter is analysed having regards to those elements characterizing the EU regulatory framework such as promoted in the European neighbourhood, and for which an EU mode of governance may be identified. The regulatory elements are: unbundling, TPA regime and tariffs system, establishment of an Independent Regulatory Authority (IRA). The degree of convergence towards the mentioned elements of regulation is evaluated having regards to EU top-down pressure for rules adoption, as well as EU indirect, network based, rules promotion. The case of network pressure is represented by the MedReg, the EU funded Association of the Mediterranean regulators for electricity and gas. At the same time, domestic, bottom-up, pressures for rules change are taken into account.

Promoting regulatory standards for energy market integration, and a functional integration mainly (Lavenex 2008), is also considered in this study the EU's method for counterbalancing the lacking exclusive competences on energy and external relations. Thus, the analysis contributes to those studies on the EU capability of inducing non-member countries to adopt and implement EU pre-determined rules. But, contrary to external governance literature, this work takes countries' institutional background as the crucial element impacting on the effective rules adoption and implementation.

The research method adopted consists of a perception survey directed at MENA regulators of the four mentioned countries. The paper is structured as follows: in Section 2 we review the literature on rules change, referring to three pressures for rules change as explanatory factors for rules diffusion: bottom-up, top-down, and networks approaches to rules diffusion and promotion. In Section 3, we report a brief description of the three elements of energy sector regulation on which our study focuses on, in order to verify the coherence between the EU domestic model of regulation and the one promoted in the southern neighbourhood. Section 4, presents the



methodology of the survey, while Section 5 reports outcomes obtained for the four case studies.

## **2. Explanatory factors for the electricity rules diffusion**

Introducing liberalization in monopoly sectors through restructuring (unbundling), competition (wholesale market), and regulation (TPA regime and IRAs set-up) are common features of the *regulatory state* (Majone 1997). These are the results of the *globalization of regulation* (Levi-Faur 2005): worldwide spreading rules and principles on energy sector management.

The first assumption of this study is that the EU is trying to establish a shared regulatory framework for the energy sector replicating, in the neighbouring countries, the model of “domestic” regulation as it has been defined since mid 1990s; thus, the EU is promoting itself as a regulatory power beyond its own borders (Schimmelfennig 2009).

The second main assumption of this study is that, in order to be effective, rules spreading needs to be followed by rules adoption and implementation in the countries’ domestic system. Thus, in addition to the presence of an external pressure for rules adoption, domestic pressures for rules change should be taken into consideration. With this regard, the institutional background (North, 1990; Levy and Spiller, 1994) of selected countries reveal the reason why, rules promoted may be adopted and implemented with a different degree of efficacy. The analysis of those elements of the *acquis communautaire* on energy, promoted in the Mediterranean region, thus, is a good method for explaining what Radaelli (2005) defines the phenomena of “*diffusion without convergence*”. Moreover, with regards to regulation, and regulatory impact assessment, recent studies confirm the importance of domestic political variables (Peci and Sobral 2011) as well as “*the role of policymakers’ ideological legacies in explaining variation in rules adoption*” (Gallardo and Murillo 2011, p.351). The institutional environment, indeed, is what makes the process of rules converge, that may be due to regional frameworks of cooperation, truly effective. Nonetheless, the institutional analysis of MENA countries is not developed in this paper, being too far from the scope of the paper, the analysis of EU direct and

indirect pressures for rules change and its effectiveness. Considerations on the institutional background of the four analyzed countries, thus, are provided only when necessary to the development of the study.

The following part of this section reports hypotheses referring to three classes of explanation for rules spreading and adoption, which develops on both previous studies on the EU external governance methods and analysis deriving by the institutional economics literature. The first explanation, considers domestic - bottom-up - pressures for rules change; it refers to MENA voluntary convergence towards the EU model for the organization of the energy sector. It conceives countries' executives as actors central to rules change. Secondly, the EU hierarchy - top-down - pressure is analyzed. The hierarchy mode of rules promotion, refers to the EU rules promotion within the Euro-Mediterranean frameworks of cooperation as developed since mid 1990s. Socialization mechanisms due to the history of cooperation between the EU and the specific countries considered, thus, are taken as relevant. The third explanatory factor, network pressure for rules change, analyse socialization mechanisms within networking initiatives. Analysing organizations promoted and financed by the EU mainly, the EU indirect pressure for rules change is assessed. Specifically, we refer to the experience of the MedReg here conceived as a network of governance.

### 2.1 Bottom-Up pressure

Bottom-up pressure refers to domestic pressures for rules change. When effective, such pressure may produce rules convergence towards a system of rules consolidated and recognized as effective at international level. The EU system of rules is taken as one of the possible final outcomes of the rules change process, together with other international norms. Convergence, thus, depends on countries' voluntary approximation towards a defined system of rules (Barbé *et al.* 2009). Reasons behind convergence may be the need of assuring that the regulatory framework of a country is credible. For this reason, in this analysis, countries in which an IRA has been established and information are available, are firstly considered. Moreover, the existence of regulated TPA regime, sector's unbundling, and incentive tariffs system, have been taken into consideration as indicators of the

commitments towards energy sector liberalization by MENA incumbents. Persisting patronage system and state-owned assets, raise doubts on the effectiveness of agencies' independence. Having established an IRA before than implementing sector's liberalization reforms, such as for Algeria, Egypt and Turkey, may result in a sort of *mimicking* recommended regulatory standards; a behaviour that do not correspond to strong regulatory commitments.

## 2.2 Hierarchy pressure

The literature on EU external governance focuses on the external diffusion of the EU *acquis*, or part of it, due to the pressure played by the EU in its immediate neighbourhood (Lavenex 2008; Lavenex & Schimmelfennig 2009). The replication of the EU system in the neighbouring countries is the expected outcome of the process of regional integration promoted. Moreover, such integration is expected to be *differentiated* (Lavenex, 2004) for the different countries being different their relation with the EU and their degree of involvement in EU initiatives. Such direct pressure, also described by the literature on EU external governance as hierarchy mode of governance, is very close to cases of *Europeanization*. As stressed by Radaelli, Europeanization is a pervasive process consisting of "*construction (b) diffusion and (c) implementation of formal and informal rules, procedures, policy paradigms, styles, "ways of doing things," and shared beliefs and norms*" emanating by the EU and incorporated in the "*domestic discourse, identities, political structures and public policies*" (Radaelli 2003, p. 30). With regards to MENA countries, we have to take into account the EU rules diffusion in absence of membership linkage, with the sole exception of Turkey, although the membership status is currently in a deadlock. In such a context, regional frameworks of cooperation usually may favour the spreading of rules by participating countries, especially when incentives mechanisms to rules change are provided. With regards the EU, current frameworks of cooperation miss such incentive mechanisms traditionally given by conditionality measures. Although included in signed APs, such measures have never been invoked (Stahn and van Hüllen 2007). As previous studies prove, conditionality works only if "*the EU offers a membership perspective in return for political reform*" (Schimmelfennig and Scholtz, 2008). Thus, the quest for rules change

through hierarchy mode of governance is expected to be not so much effective in MENA case.

### 2.3 Network pressure

Usually recognized as in between the top-down and bottom-up method, the indirect mode of rules diffusion refers to all those *new* modes of governance (Eberlein and Kerwer 2002) generally driven by “*voluntarism and inclusion mechanisms*” (Héritier 2002), such as networks. Network forms of cooperation are described as the most promising, specifically in those cases in which strong interdependencies between actors exist. Contrary to top-down explanations, networking cooperation allows MENA countries to act not as passive beneficiaries of certain promoted rules, but as actors participating in rules definition. Thus, networks may facilitate a shared regulatory framework to emerge by virtue of mediation processes among actors instead of top-down diffusion or simple imitation. In order to make indirect cooperation functioning, it is necessary to put networks, shared framework of action and shared regulatory framework, into place. With this regard, networks of governance “*are made up of organizations which need to exchange resources to achieve their objectives*” (Rhodes 1996, p. 658). Shared processes for decision making usually characterize networks, which tend to develop their own “*internal relational rationality*” in order to manage complex situations (Ladéur 2004). Moreover, the literature on EU external governance takes all actors in the networks as formally equal, although it recognizes that power asymmetries may exist. The same literature affirms that networks do not produce binding rules, but *mutual agreements* and often *prescribe procedural modes of interaction rather than final policy solutions* (Lavenex and Schimmelfennig 2009, p. 798).

Having regard to networks, we focus on the case of the Association for Mediterranean Regulators for Electricity and Gas, MedReg. Funded by the EU in 2006 as a cooperation initiative, the association is today registered as not for profit association under the Italian law, and its Secretariat is based in Milan. Although still depending from EU financial sources, the MedReg is a membership based association. It includes Albania, Algeria, the Palestinian Authority, Bosnia-Herzegovina, Cyprus, Croatia, Egypt, France, Jordan, Greece, Israel,

Italy, Malta, Morocco, Montenegro, Portugal, Slovenia, Spain, Tunisia and Turkey.

The association presents those characteristics that Rhodes (1996) identifies for networks:

- voluntary cooperation;
- membership;
- interdependent authorities, considering that even authorities of EU Member States are taking part.
- It should be autonomous from the States, even though officers in charge of specific committees are named by the national regulatory body and governments member of the Association.

To a first extent, MedReg seems to be characterized by *interdependent and continuously interacting* (Rhodes 1996) members. Although depending on the support of states, it is self governing, having a network's secretariat, and is characterized by internal procedures of coordination. The attempt to achieve coordination has only recently been started, thus it is until now difficult to affirm that *self-organizing practices* and *members' co-definition of rules* (Rhodes 1996) exist effectively. On the contrary, we expect that problems related to a young and very flexible structure of coordination may limit, to certain extent, the effectiveness of MedReg's action and, consequently, the EU indirect pressure for rules change.

To clarify contents of EU energy rules promoted, the next section reports the evolution of the EU regulatory experience in the energy, electricity and gas, sector.

### **3. Energy Rules Promotion. The EU model for sector organization and the rationale behind it**

Table 1, at the end of the chapter, summarizes the main issues characterizing the energy market restructuring within the EU, which is the expression of worldwide consensus over electricity and gas sector liberalization (Jamasp and Pollitt 2005). The EU liberalization process was mainly a political decision based on the need of guarantee the freedom of enterprise (producers side of the market) and the freedom of choice (consumers side), and to make competition within the Union effective. The process of liberalization, and further integration of

energy market, implied the unbundling of networks and independence of regulators both from the State and the energy industry. This process of progressive liberalization can be summarized in three *waves*, which refer to the three directives reported in Table 1. The Table shows the development, in parallel, of the electricity and gas liberalization. The table also shows how progressively the role of regulators emerges and the unbundling transmission and distribution operators acquires relevance. The current regulatory framework is the final result of such gradual changes. When a sector inquiry by the European Directorate on Competition (DG COMP) in 2005 shown that dominant positions were still at stake and that a further wave of liberalization was required, a “third package” of directives started to be defined.

The current package focuses on: further unbundling of the system; independence of system operators; the strengthened role and independence of national regulators; the set up of ENTSO –E and G – the European association of transmission and system operators for both electricity and gas, as well as the establishment of ACER - the Agency for the cooperation of energy regulators.

Principles of transparency and liberalization, such as the system unbundling, TPA regime, and IRA set-up, can be identified in documents regarding the Euro-Mediterranean cooperation too. With regards the southern neighbouring countries, indeed, the EU tried to extend the internal energy market (IEM) principles through a policy *mirroring* domestic experience and following the strategy for Central Europe (Matlárý 1995, p. 55). A first attempt to define an Energy Charter on the model of the Energy Charter Treaty was unsuccessful. Then, the project of regional framework of cooperation emerged and the Euro-Mediterranean Energy Forum was launched in 1996. Although very few has been achieved during the second half of the 1990s in terms of EU rules adoption by Mediterranean countries, it should be stressed that energy remains one of the main pillars of EU cooperation programs in the region. The Communication “*On the development of Energy Policy for the Enlarged EU, its Neighbors and Partner countries*” (European Commission 2003b) conceives energy cooperation in terms of establishing a common regulatory framework for an integrated Euro-Mediterranean energy market. Thus, directed at energy market integration between the two shores of the

Mediterranean Sea, the content of the EU action in terms of rules promotion may be summarized as follows: promotion of system unbundling, regulated TPA regime, establishment of IRAs, and an incentive based tariff system.

With regards to IRAs, they are probably one of the most tangible outcomes of market reforms concerning the utilities industry. The OECD describes these new entities as *“one of the most widespread institutions of modern regulatory governance”* (OECD 2002). Agencies’ autonomy and independence is a sign of the credibility of incumbents’ commitments not to undermine the independence of the regulated sector (Trillas and Montoya 2011). Thus, to assure credibility of the liberalization process, the inception of IRAs is fundamental (Levy and Spiller, 1994; Majone 1996) together with a guarantee to avoid political capture of such authorities. Regulatory agencies were given the mandate to regulate the activity of network industries and to discipline the potential conflict of interests between the government and state controlled utilities. The IRAs ought to operate with their own specialized staff and detailed tasks, independently of ministries or government departments. The European Commission especially urged member states’ governments to establish formally independent regulators in the energy industry, leaving however the decision about the definition and the scope of the delegated powers to national executives. Typically, delegated regulatory tasks involve price setting decisions, both at the retail and wholesale level - whenever access to essential facilities is needed to develop market competition - the definition of entry conditions, the imposition of quality standards and all the technical rules to use or access existing infrastructures. All this considered, it is clear that, an assessment of roles and functions of MENA IRAs is pivotal to the understanding not just of the agencies’ independence as per se, but as a measure of the degree of diffusion of the model of liberalization promoted; IRAs’ autonomy and independence being fundamental to effective unbundling, non-discrimination among utility companies, and capable of facilitating the entrance of new, private, operators.

#### 4. Perception Survey Method adopted

To analyze the perception of rules promotion, data have been collected through a survey directed at regulators from Algeria, Egypt, Jordan and Turkey. The questionnaire investigates respondents' perception of the role that both the EU and MedReg have in terms of rules adoption. The survey is based on the literature on the EU external governance and considers eventual socialization mechanisms among countries in the same region (Lavenex and Schimmelfennig 2009; Schimmelfennig and Sedelmeier 2005; Gilardi 2005a, b). The survey has been structured following OECD (2012) recommendations on measuring regulatory performance through perception surveys. Specifically, we take care to avoid question that are suggesting answers and question priming, which may happen when a previous question suggests the answer to the following one. The survey has been tested by experts in the Florence School of Regulation, Oxford Energy Institute, and Italian International Affairs Institute.

The majority of questions asked respondents to express an evaluation of the considered elements on a scale from 0 to 5. In order to place countries along a continuum between 0 and 1, all questions referring to 0 to 5 scale adopt the following coding system: 5=1.00; 4=0.75; 3=0.50; 2 and 1=0.25; 0=0. The results reported do not confirm the tendency, stressed by OECD (2012) that respondents show answering at the median (3) in a scale from 0 to 5. Thus, this is a first confirmation that the answers we have obtained are informed one.

With regards the regulatory agencies involved in the study, information are provided in Table 2a. All of the countries involved respond to our selection criteria of having established an IRA and have adopted, to a certain extent, sector unbundling and TPA regime. The Table 2b reports details of the agency organization model, as emerged by the analysis of existing literature and agencies' involvement in managing key aspects of the energy sector: unbundling, TPA, tariff setting mainly. The country model of unbundling, TPA and tariff setting is briefly reported in Table 2c; detailed information are available only for the electricity sector.

The study here reported is of qualitative nature. Answers obtained have been provided by respondents that have already taken part in

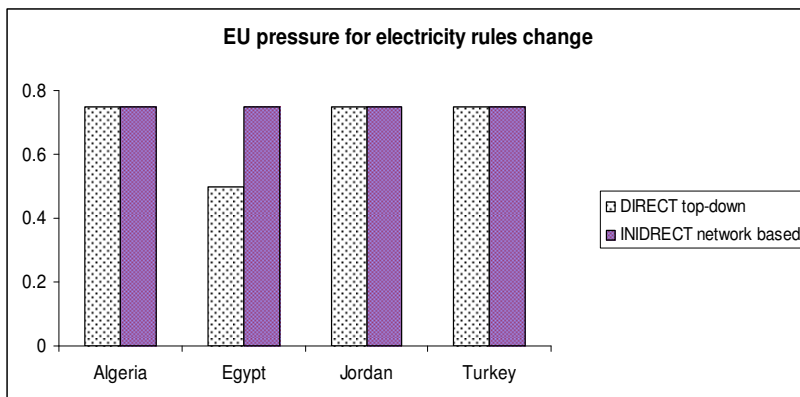


training sessions arranged by the MedReg. Thus, respondents were aware of networks role and competences, as well as of the EU programs for cooperation. Moreover, data collected have been completed by semi-structured interviews designed according to the conceptual background on methods and pressures for rules promotion described in Section 2. Interviews follow the same structure of the survey, although their nature of semi-structured question let respondents more free to justify their answers. The Table 2d reports number of respondents to the survey and to semi-structured interviews. Officers of Egyptian (5 respondents, including the Agency Managing Director) and Algerian (5 respondents) regulatory agencies have been interviewed in May 2011 during the Florence School of Regulator and MedReg training seminar dedicated to Mediterranean energy regulators. It should be stressed that interviews, as well as survey's results, do not let different answers to emerge within the same organization. The justification for the missing variation is twofold: firstly, all respondents were from mainly state controlled organization; thus, we assume that respondents can't freely express their own opinion but the opinion of the agency. Secondly, for those countries for which interviews are not available, it should be stressed that officers involved were from agencies' communication offices, which are usually reporting the position and the view of the agency more than the officers' personal view.

## 5. Perception of rules promotion: results of the survey

### 5.1 Hierarchy vs. Network

In order to measure the role that the EU as energy rules promoter has, regulators have been asked to express an evaluation, on a scale from 0 to 5, of the EU top-down pressure compared to the EU indirect one. The question asked: **“On a scale from 0 to 5, how do you perceive the EU (i.e: European Commission Directorate for Energy, EU Development Cooperation Office mainly) methods for the energy rules promotion?”**. The options provided were three: Direct pressure (top-down); Indirect (horizontal, participatory based method); Non-existent. Figure 1 shows perception of the EU methods for rules promotion.

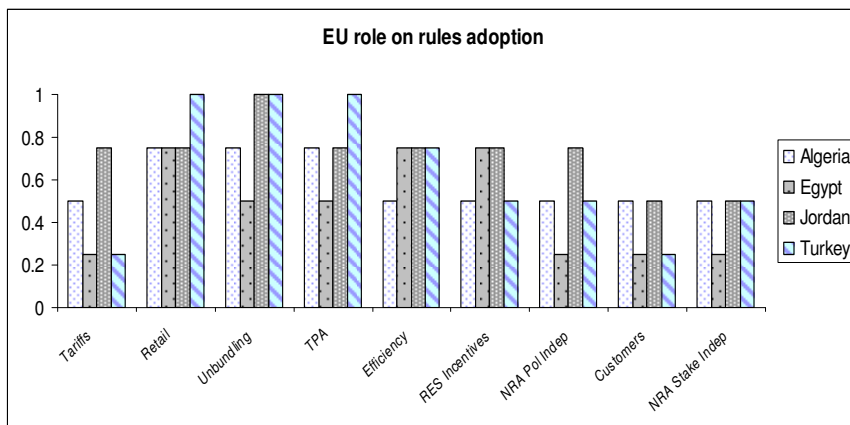


**Figure 1:** EU pressure for electricity rules adoption

The low variation in the first results shows that both the EU direct pressure and networking initiatives are appreciated by respondents. Considering the need to further clarify the meaning of direct and indirect pressure played by the EU, the second question of the survey asked if, in the opinion of respondents, **“the EU action in the energy sector is more effective when: acting directly in bilateral relations, or when promoting energy rules indirectly through regulatory networks, such as MedReg?”**. All respondents express a clear preference for the *“acting directly in bilateral relations”* option. Contrary to what expected (Section 2), this result provides a first confirmation of the relevance of the EU hierarchy mode in respondents’ perception. At the same time, considering that respondents are governmental actors, it is not surprisingly that they prefer the direct involvement of the EU Directorates.

The role of EU direct rules promotion has been investigated with regard to specific issues of energy regulation. Specifically, **“On a scale from 0 to 5, how would you say that the cooperation with the EU impacts in terms of rules adoption or rules change in the followings sectors?”**. The question refers to: the setting of tariffs, retail – market competition, sector’s unbundling, TPA regime, energy efficiency programs, incentives for renewables, IRA political independence, attention to vulnerable customers, and IRA stakeholders independence.

Figure 2 shows differences in MENA regulators' perception for each issue considered.



**Figure 2:** EU role on rules adoption

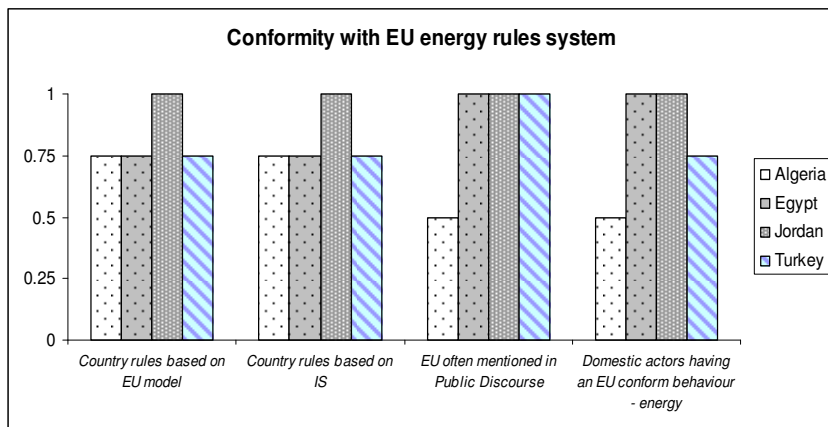
The EU influence results relevant on those aspects closely related to market (retail, tariff setting), as well as to sector's unbundling and TPA. The EU influence on IRAs independence, both from political power and stakeholders, does not result effective.

To conclude the section on EU rules promotion method, we asked respondents to express, **on a scale from 0 to 5 their agreement on the following:**

- **energy rules are based on EU model;**
- **energy rules are based on internationally recognized standards (IS);**
- **EU energy rules are very often mentioned in the public discourse,**
- **as regards energy, domestic decision makers follow EU recommendations in their behaviour to the.**

This question is aimed at assessing the degree of adherence of MENA system to the model recommended by the EU, showing if EU regulations are potentially relevant for the domestic system. Answers to this question provide a measure of potential *Europeanization* without membership. In this regard, we refer to the way Europeanization is considered in the seminal work of Schimmelfennig and Sedelmeier

(2005). The study considers not just the *formal* rules adoption but also the *behavioral* and *discursive* concept of rules adoption. The former is referring to rules-conforming behaviour, and the latter to the “incorporation of a rule as a positive reference into discourse among domestic actors” (Schimmelfennig and Sedelmeier 2005, p.8).

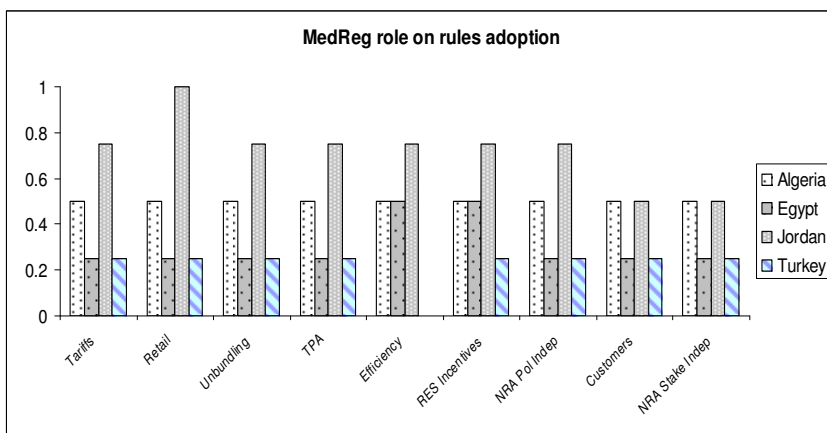


**Figure 3:** Respondents perception of the degree of conformity between domestic rules and actors’ behaviour and the EU recommended one

Such as showed in Figure 3, having an established framework of cooperation helps in expanding EU system of rules and has a positive impact even on domestic actors’ behaviour. Algeria, indeed, being not part of APs and not directly involved in EU bilateral initiatives, shows the low relevance of the EU in domestic public discourse as well as in the domestic actors’ behaviour. Interviews with officers from Algerian regulators confirm that rules for the electricity sector have been adopted mainly because of the general consensus on their effectiveness, more than because of EU recommendations. The EU system, indeed, proves to be relevant for Egypt. Interviews with Egyptian regulators confirm the intention of policy makers to adopt a system the closest as possible to the EU one. Jordan answers to the survey, confirm high appreciation for the EU rules and international standards. Turkey partially confirms what has been argued with regard the Europeanization hypothesis and the relevance of membership perspective for domestic actors’ behaviour. Although the EU system is

often quoted in public discourse, the domestic system does not entirely fits with the EU one and even domestic actors' behaviour is not conforming to the one recommended by the Union.

Considering network based rules diffusion, we asked respondents to compare the indirect rules promotion, through MedReg network mainly, with the EU hierarchic pressure. In addition to MedReg membership, we consider the perception of the role the network may have for the same regulatory aspects for which the EU role has been investigated. Specifically, we asked **“On a scale from 0 to 5, how would you say that the cooperation within MedReg impacts in terms of rules adoption or rules change in the followings?”**



**Figure 4:** MedReg role on rules adoption

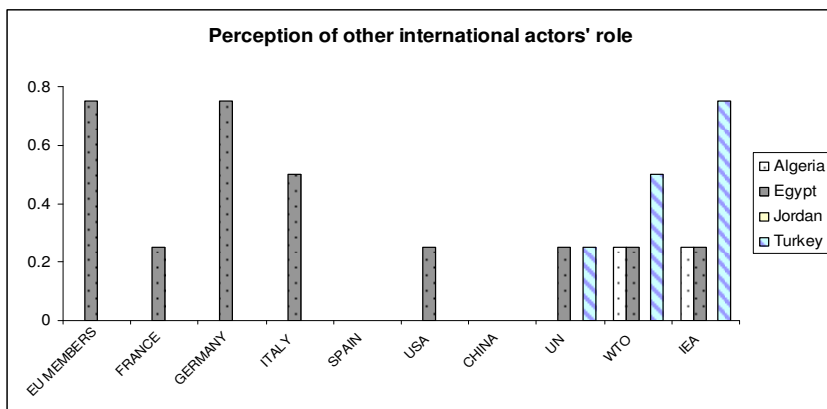
Results do not confirm hypotheses provided in the literature on the relevance of the horizontal method of rules promotion and the role of MedReg. Respondents, on the contrary, confirm the relevance of direct, top-down rules promotion. Maybe due to its recent set-up, in 2006, MedReg does not seem to be as effective as networks of governance should be, following the literature on the issue. This is proved by results provided with Figure 4. With the exception of Jordan, the other countries do not give high scores to MedReg's action in specific regulatory sector, as well as on promoting IRAs' independence. On the contrary, these results show those critical aspects associated to networks and networking governance.

A second question referring to MedReg investigate the presence of those elements proper of network of governance as identified by the literature. We asked the following: **“On a scale from 0 to 5, how would you say that the following options characterize members' relations within MedReg?”**. The options given were: Participatory model of decision making; Codified Procedural Rules; Monitoring and Control Procedures; Resources sharing. Answers are round, on average, between 2 and 3 for all options, with the exception of Egyptian regulators that gives a value of 4 to the second and third options.

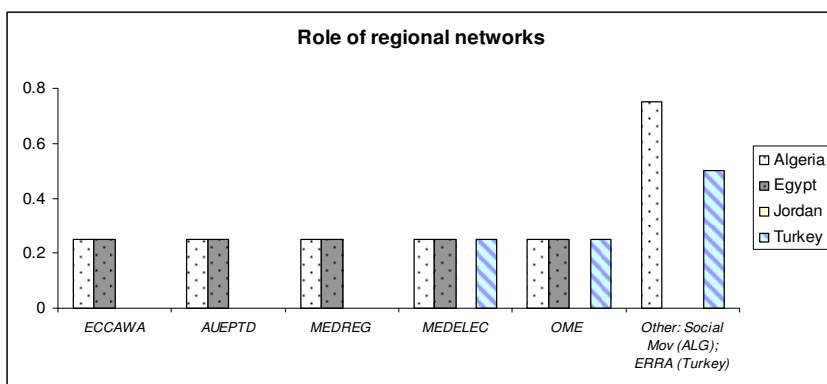
These data confirms weaknesses of network based initiatives. As recent works on EU domestic cases of network governance mainly prove (Casey and Lawless 2011), networks are weakened by lack of legitimacy in the network participants' perception, and high structural flexibility which limits an effective coordination within the network. Further investigation may reveal if such a limit exists for MedReg too.

### 5.2 Role and relevance of the bottom-up explanatory factor

The perception of other international actors, regional networks and domestic factors with regards to energy rules adoption has been asked. **On a scale from 0 to 5, respondents have been asked to compare the role of the three types of actors: other international actors, with the exception of the EU; networks, MedReg included; and domestic actors.** Figure 5 shows result with regard to *“other international actors”*. European countries have been included considering different perceptions that respondents may have of country specific energy foreign policy compared to the EU one; the latter often criticized for not being the expression of “one single voice”. In this regard, only Egypt answered to all provided options; Algeria replied only to WTO and IEA assigning them a score of 1. Turkey gave a 1 to the UN system, 3 to WTO, and 4 to IEA. Despite the recent interest shown by emerging powers for the MENA region, respondents did not reply on this point here synthesized by “China”.



**Figure 5:** Comparison between international actors, EU excluded



**Figure 6:** Regional networks as energy rules promoter

**Note:** ECCAWA, Economic Social Committee for Arab Countries in West Asia, UN system.

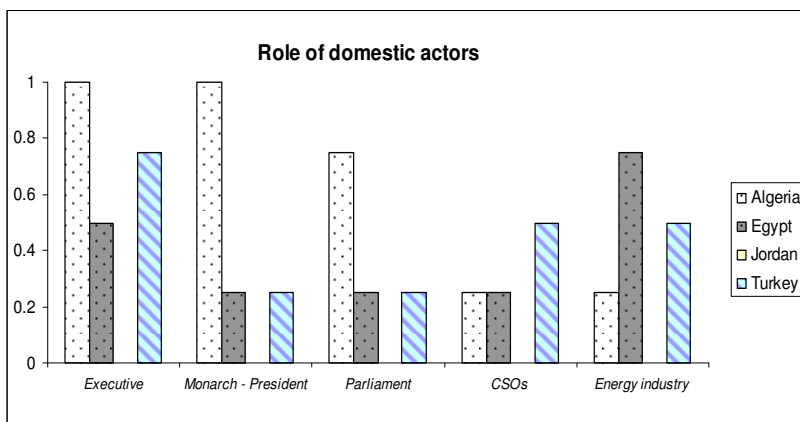
AUEPTD, Arab Union for Electricity Producers, Transmitters and Distributors, based in Amman Jordan.

MEDELEC, Mediterranean Committee for Electricity, grouping together the entire Mediterranean electrical industry.

OME, Mediterranean Energy Observatory, non-profit research centre grouping together energy industries of the Mediterranean.

ERRA, Energy Regulators Regional Association, a network of regulatory bodies from the Central European and Eurasian region, having affiliates from Africa, Asia, the Middle East and the USA.

The same question, and the same scale of preferences, have been used with regards to *regional networks of cooperation*, focusing on the Mediterranean and Middle East. As Figure 6 shows, their weight in respondents' perception is very low. As regards our case of network governance, MedReg, low scores have been registered also in this case, while other networks seem better performing (see ERRA in "Other" options).



**Figure 7:** Relevance of domestic actors

Finally, the role of bottom-up pressure has been analyzed. Although few replies, the **bottom-up pressure for rules change** (Figure 7) comes out to be the most relevant in the region, with the executive power as the actor pushing for effective rules adoption and implementation. Turkish respondent accord high importance to Civil Society Organizations (CSOs) and Energy Industry too, showing the extent of veto players different from the executive. The higher score given to Energy Industry by Egypt shows industry stakeholders as relevant veto players, more than the executive power. Nonetheless, one should be aware of the ownership structure of MENA energy industry, mainly state-owned. Thus, the existing continuity between the industry board of directors and the executive powers is the institutional factors that mainly affect countries' regulatory framework. This result, jointly with findings provided in Figure 2, reveal how the domestic institutional environment plays the major role in the sector's reform



projects also with regards to IRAs independence, both from the political power and energy stakeholders.

## **6. Conclusion**

The study shows the findings of a survey addressed at MENA regulators, investigating both electricity sector organization and the pressures for rules adoption at both domestic and international level. Although based only on four countries, the sample provides a clear picture of the MENA population. Examined countries have adopted rules for electricity sector restructuring in the period considered such as sector's unbundling and the establishment of IRAs. At this stage of the analysis, there are no regime for TPA that can be registered, while tariffs - a very important regulatory elements on which independence and autonomy of decision makers can be measures - are managed by the national IRA only in the Jordan and Turkish case.

With regards to rules promotion, we consider three explanatory factors: bottom-up pressure for rules change, in which the domestic actors play the most relevant role; top-down EU pressure for rules adoption; horizontal pressure, the one played by technical networks grouping both states' representatives and experts. Being financed by the EU, MedReg has been conceived as a case of network governance and indirect EU rules promotion. When comparing the direct and indirect pressures, respondents confirm that the EU is more effective when exerting top-down pressure. Contrary to the literature on EU external governance, which usually defines networks as one of the most promising modes of EU rules diffusion in sectors not responding to the EU exclusive competences (Knill and Tosun, 2009), MedReg does not confirm to be a relevant case for rules promotion. Although having the characteristics that the existing literature associate to networks of governance, MedReg is not recognized as effective in terms of rules promotion with regard specific issues (i.e., tariffs) and in comparison with the EU by our respondents. The same performance is confirmed when MedReg is compared to other networks, such as ERRA. Among international actors, the EU confirms to be relevant also in terms of MENA actors' conformity with EU provisions. At the same time, when the role of international actors, regional organizations, and the

domestic actors are compared, the latter are perceived as the most effective in terms of pressures for rules adoption. Domestic institutions are essential for effective and credible regulatory commitments, as well as for the independence of IRAs. This result is not a surprise. In contexts like MENA, characterized by long-lasting regimes, one is expected to have the executive power as the sole decision maker. Findings show that, decisions on adopting and implementing sectoral reforms suffers the veto of energy stakeholders industry. Moreover, the external rules promotion, both at top-down and networks level, when concrete incentives to rules change are missing, risks to be not effective; in the best case the result may be a pure cosmetic change, such as in the case of non independent regulatory bodies.

# Tables

**Table 1 EU Legislative sources: gas and electricity sector**

<b>DIRECTIVE 96/92/EC for Electricity DIRECTIVE 98/30/EC for Gas</b>	<b>DIRECTIVE 2003/54/EC for Electricity DIRECTIVE 2003/55/EC for Gas</b>	<b>DIRECTIVE 2009/72/EC for Electricity DIRECTIVE 2009/73/EC for Gas</b>
Generation: principle of non-discrimination; Authorization procedure (art. 4 DIR. 98/30/EC). For electricity sector: possibility of tendering (art. 4, DIR. 96/92/EC)	Generation: Tendering procedure for new capacity for the electricity sector (art.7 DIR. 2003/54/EC). Authorization procedure respecting non-discrimination principle, for gas (art. 4 DIR. 2003/55/EC)	Generation: Tendering procedure for the electricity sector (art.8 DIR. 2009/72/EC) Authorization procedure respecting non-discrimination principle, for gas (art. 4 DIR. 2009/73/EC)
TSO: Unbundling: of accounts (art.10 DIR. 96/92/EC)	TSO: Unbundling - independent at least in terms of its legal form, organization and decision making from other activities (art.10, DIR. 2003/54/EC; art. 9 DIR. 2003/55/EC)	TSO Unbundling: independent at least in terms of its legal form, organization and decision making from other activities (art.9 DIR. 2009/72/EC; art.9 DIR. 2009/73/EC)
DSOs: Unbundling of accounts (art.14 DIR. 96/92/EC)	DSOs Unbundling: legal, organization and decision making (art.15 DIR. 2003/54/EC; art.13 DIR. 2003/55/EC)	DSOs Unbundling: legal, organization and decision making (art.26 DIR. 2009/72/EC; art.26 DIR. 2009/73/EC)
TPA regime: regulated, negotiated, single buyer (art.15-18 DIR. 96/92/EC; art. 14-16 DIR. 98/30/EC)	TPA regime: regulated, based on public tariffs (art. 20 DIR. 2003/54/EC; art. 18 DIR. 2003/55/EC)	TPA regime: regulated based on public tariffs (art. 32 DIR. 2009/72/EC; art.32 DIR. 2009/73/EC)
IRA: non-specified	IRA designation (art. 23 DIR. 2003/54/EC; art.25 DIR. 2003/55/EC)	IRA strengthened role and powers (chapter IX DIR. 2009/72/EC; chapter VIII DIR. 2009/73/EC)

† Note: TSO stands for Transmission System Operator; DSO stands for Distribution System Operator

**Table 2a Agency identification**

Country	IRA Name	IRA Acronym	Year	Legislative source
Algeria	Electricity and Gas Regulatory Commission	CREG	2002	Law No 02-01, February 5, 2002 on electricity and gas distribution
Algeria	Autorité de Régulation des Hydrocarbures	ARH	NP*	NP*
Egypt	Electric Utility and Consumer Protection Regulatory Agency	EGYPTERA	2001	Presidential Decree no. 339 for reorganizing of the authority
Jordan	Electricity Regulatory Commission	ERC	2001	Council of Ministers decision issued on 15 January 2001
Turkey	Energy Market Regulatory Authority	EMRA	2001	Electricity Market Law, 4628, 2001

**Source:** Authors' survey on the Electricity Sector of MENA countries and the role of international cooperation. Agencies statutes and laws.

**\*NOTE** - NA: information not available

**Table 2b Agency organization and role managing energy sector**

Country	IRA Acronym	IRA managerial body* (RC; SHR)	IRA Under Incumbents' Control	IRA Advisory body, partially independent	IRA COMPETENCES **: UNBUNDLING	IRA COMPETENCES **: TPA	IRA COMPETENCES **: TARIFF SETTING
Algeria	CREG	RC - Board of four commissioners	X				
Algeria	ARH	RC - Executive Committee President, and 5 Directors	X				
Egypt	EGYPTERA	RC	X				
Jordan	ERC	RC	X		X		X
Turkey	EMRA	RC		X	X		X

**Source:** Country Reports from the Euro-Mediterranean Ministerial Conference, Limassol 2007, have been considered for the analysis of IRAs competences on energy. Information on their organization have been asked during interviews conducted on May 2011 and, for Jordan and Turkey mainly, in the survey text.

**\*NOTE:** RC model – Regulatory Council, Chairman plus Council members and Regulatory Staff;

SHR model - Single Head Regulator, one President plus Regulatory staff.

When available, additional information are provided in the table

**\*\* NOTE:** Competences are reported only when indicated as exclusive competences of the agency. Shared competences or issues on which the agency has only a consultative role are not provided

**Table 2c Electricity sector degree of openness**

Country	UNBUNDLING	TPA	TARIFF SETTING
Algeria	FUNCTIONAL separation between generation, transport and distribution in the electricity sector	Introduced in 2002	Fixed by the Prime Minister
Egypt	FUNCTIONAL <i>missing detailed information</i>	NA	Defined by the Government.
Jordan	Full ownership unbundling achieved in 1999	Regulated regime	NA
Turkey	Sector unbundled	Regulated regime	Approved by IRA

**Source:** Country Reports from the Euro-Mediterranean Ministerial Conference, Limassol 2007

**\*NOTE** - NA: information not available

### 2d Respondents

Country	IRA Acronym	Survey Respondents	Interview Respondents
Algeria	CREG	1	3
Algeria	ARH	3	2
Egypt	EGYPTERA	1	5
Jordan	ERC	1	NA*
Turkey	EMRA	1	NA*

**\*NOTE** - NA: information not available. These agencies did not take part in MedReg FSR Training on May 2011, when other interviews have been conducted





## References

Barbé E., Costa O., Herranz Surallés A., Johansson-Nogués E., Naturski M., Sabote MA., 2009, "Drawing the Neighbours Closer to What?: Explaining Emerging Patterns of Policy Convergence between the EU and its Neighbours", *Cooperation and Conflict*, 44, pp. 378-399.

Casey D.K., Lawless J.S., 2011, "The parable of the poisoned pork: Network governance and the 2008 Irish pork dioxin contamination", *Regulation & Governance*, 5, pp. 333-349.

CREG, 2010, *Rapport d'activité* [www.creg.gov.dz](http://www.creg.gov.dz)

Del Sarto R., Schumacher T., 2005, "From EMP to ENP: What's at Stake with the European Neighbourhood Policy towards the Southern Mediterranean?", *European Foreign Affairs Review*, 10, pp. 17-38.

Eberlein B., Kerwer D., 2002, "Theorising the new modes of European Union governance, European", *European Integration Online Papers EIoP*, 6, pp. 1-17.

European Commission, 2003, *Communication On the development of Energy Policy for the Enlarged EU, its Neighbors and Partner countries*, Brussels, 26.5.2003 COM(2003) 262 final/2.

European Commission, 2007, *Fifth Euro-Mediterranean Ministerial Conference on Energy, Final Report*, Limassol.

Gallardo C.M., Murillo M.V., 2011, "Agency under constraint: Ideological preferences and the politics of electricity regulation in Latin America", *Regulation & Governance*, 5, pp. 350-367.

Gilardi F., 2005a, "The Formal Independence of Regulators: A Comparison of 17 Countries and 7 Sectors", *Swiss Political Science Review*, 11(4), pp. 139-167.

Gilardi F., 2005b, "The Institutional Foundations of Regulatory Capitalism: The Diffusion of Independent Regulatory Agencies in Western Europe", *ANNALS of the American Academy of Political and Social Science*, 598, pp. 84-101.

Héritier A., 2002, *Common Goods: Reinventing European and International Governance*. New York; Oxford: Rowman & Littlefield, Lanham, Boulder.

Jamasb T., Pollitt M., 2005, "Electricity Market Reform in the European Union: Review of Progress toward Liberalization & Integration", CEEPR Working Paper 05-003.

Kausch K., Youngs R., 2009, "The end of the 'Euro-Mediterranean vision'", *International Affairs*, 85(5), pp. 963-975.

Knill C., Tosun J., 2009, "Hierarchy, networks, or markets: how does the EU shape environmental policy adoptions within and beyond its borders?", *Journal of European Public Policy*, 16 (6), pp. 873-894.

Ladeur K.H., 2004, *Public governance in the age of globalization*. Aldershot: Ashgate Publishing Limited.

Lavenex S., 2004, "EU external governance in wider Europe", *Journal of European Public Policy*, 11(4), pp. 680-700.

Lavenex S., 2008, "A governance perspective on the European neighbourhood policy: integration beyond conditionality?", *Journal of European Public Policy*, 15(6), pp. 938-955.

Lavenex S., Schimmelfennig F., 2008, "Relations with the Wider Europe", *Journal of Common Market Studies*, 46, pp. 154-164.

Lavenex S., Schimmelfennig F., 2009, "EU rules beyond EU borders: theorizing external governance in European politics", *Journal of European Public Policy*, 16(6), pp. 791 - 812.

Levi-Faur, D., 2005, "The Global Diffusion of Regulatory Capitalism", *Annals of the American Academy of Political and Social Science*, 598, pp. 12-32.

Levy B., Spiller P.T., 1994, "The institutional foundations of regulatory commitment: a comparative analysis of telecommunications regulation", *Journal of Law, Economics & Organization*, 10 (2), pp. 201-246.

North D., 1990, *Institutions, Institutional Change and Economic Performance*. Cambridge: Cambridge University Press.

Majone, G., 1996, *Regulating Europe*. London: Routledge.

Majone G., 1997, "From the positive to the regulatory state: causes and consequences of changes in the mode of governance", *Journal of Public Policy*, 17(2), pp. 139-167.

Matlary J.H., 1997, *Energy Policy in the European Union*, London: Palgrave MacMillan.

MedReg, 2010, *Heading to an integrated Mediterranean Electricity Market*, Final Report.

OECD, 2002, *Regulatory Policies in OECD Countries. From Interventionism to Regulatory Governance*, Paris.

OECD, 2012, *Measuring Regulatory Performance, a practitioner's guide to perception surveys*, Paris.

Peci A., Sobral F., 2011, "Regulatory Impact Assessment: How political and organizational forces influence its diffusion in a developing country", *Regulation & Governance*, 5, pp. 204-220.

Radaelli C.M., 2003, "The Europeanization of Public Policy", in: Featherstone K., Radaelli C.M. (eds), *The politics of Europeanization*. Oxford: Oxford University Press, pp. 27-56.

Radaelli C.M., 2005, "Diffusion Without Convergence: How Political Context Shapes the Adoption of Regulatory Impact Assessment", *Journal of European Public Policy*, 12(5), pp. 924-943.

Rhodes R.A.W., 1996, "The New Governance: Governing without Government", *Political Studies*, XLIV, pp. 652-667.

Schimmelfennig F., 2009, "Europeanization beyond Europe", *Living Reviews in European Governance*, 4(3), pp. 1-22.

Schimmelfennig F., Scholtz H., 2008, "EU Democracy Promotion in the European Neighbourhood Political Conditionality, Economic Development and Transnational Exchange", *European Union Politics*, 9(2), pp. 187-215.

Schimmelfennig F., Sedelmeier U., 2005, *The Europeanization of Central and Eastern Europe*. New York: Cornell University Press.

Stahn A., & van Hüllen V., 2007, "Different actors, different tools? Approaching EU and US democracy promotion in the Mediterranean and the Newly Independent States", Paper of the European Union Studies Association (EUSA) Tenth Biennial International Conference, Montreal, Canada.

Zinnbauer D., Dobson R., Despota K., 2009, *Global Corruption Report*, Transparency International. Cambridge: Cambridge University Press.

Trillas F., Montoya M.A., 2011, "Commitment and regulatory independence in practice in Latin American and Caribbean Countries", *Competition and regulation in network industries*, 12(1), pp. 27-56.

### **Laws quoted**

Directive 2003/54/EC of the European parliament and of the Council of 26 June 2003, concerning common rules in the internal market for electricity repealing Directive 2003/54/EC.

## Chapter 3

# **Institutional Background of Southern Mediterranean countries: the exogenous factors affecting both current energy regulation and potentials for regulatory changes**

### **1. Introduction**

Projects for electricity production from renewable sources, such as Desertec and the Mediterranean Solar Plan, make Southern Mediterranean countries increasingly relevant in terms of energy generation and transmission. These countries are involved, since mid 1990s, in EU funded programmes and policies for regional integration. In the past ten years, the Euro-Mediterranean cooperation on energy was centred on sector's liberalization through the extension of rules; with this regard, spreading rules part of the EU energy *acquis* was the main issue at stake. The current cooperation projects, indeed, mainly focus on the need to create a favourable and shared, as much as possible, regulatory environment for new investments in energy generation and distribution from solar power, and networks' renewal. The study identifies those institutional features of Middle East and Northern Africa (MENA) countries, which determine restraints to regulatory discretion and may favour and/or limit country's specific commitments to regulate the sector, as well as a shared Euro-Mediterranean regulatory framework.

Countries' institutional background (North 1990) is exogenous to the analysis of MENA electricity sector. It attains to executive-legislative relations and reciprocal vetoing, the independence of judicial power by political power, and the role of bureaucracy. Moreover, this study conceive religious groups and the army as other two potential veto factors that may impact on reforming processes of the economic and energy sector. Domestic factors are analysed under the lenses of the veto players concept (Tsebelis 2002). Usually referred to the reform-making behaviour of veto players in democratic countries (König and Debus 2010), the theory builds on the concept of *stability* of

domestic institutions for countries' growth. With regards to developing countries, indeed, previous studies (Ferreira Filho 2007) prove that promoting economic growth and economic reforms processes challenge the status quo position of veto players. In countries where multiple veto players exist, and are poorly polarized, reforming processes may generate credible and stable regulatory frameworks, as well as a positive environment for investments (Roberts 2011). Thus, the establishment of Independent Regulatory Agencies (IRAs), as well as the reforming processes of the energy sector, have potentials for threatening the maintenance of status quo position by existing veto players in MENA countries too. Nonetheless, MENA authoritarian regimes mainly, are characterized by strong and polarized veto powers; specifically *single-party institutional structures* are the main aspect of a *new form of authoritarian rule that can be characterized as a crony capitalist and landlord spoils system cloaked in a multiparty democratic façade*" (King 2009, p.87). This study, which develops an institutional analysis of MENA countries largely based on the methodology by Levy and Spiller (1994, 1996), shows that one of the powerful actors in the Mediterranean context are the executive power and bureaucrats, the two being in a very close relation. Such relation may generate a regulatory framework characterized by rigidity and not easy adaptation to new challenges, such as the integration of intermittent renewables in the energy system.

This implies that the main situation we expect to encounter is the one with a very limited room for sector liberalization, limited opportunities for private, foreigners included, investors, and predominance of state-owned utility companies. Being MENA energy companies mainly state-owned, managerial boards of utility industries are thought as part of that bureaucracy closely linked to the executives.

The paper is so articulated: Section 2 reports the model of analysis as provided by the literature. This section identifies the main mechanisms for restraining regulators' discretion we analyse with regards to the MENA countries. This section focuses on the role that regulatory agencies may have in restraining the discretion of political power, limiting cases of administrative expropriation. Then, paragraph 2.1, describes the method of analysis as derived by Levy and Spiller

study; while, in paragraph 2.2, we adapt such method to our case study. Section 3 reports the results of the institutional endowment analysis, enlightening those mechanisms restraining regulators' discretionary power for each considered country. Section 4, describes the current organization of the electricity sector, for each analysed country, with an indication of existing regulatory restraints. Conclusions develop on the main interesting points of the institutional analysis.

## **2. Impact of domestic institutions on independence of national regulatory agencies. The framework for the analysis**

The definition of a regulatory framework by states' actors correspond to the view of countries as regulatory States (Majone 1994), a feature that emerged globally in the aftermath of the liberalization waves of the last 30 years. One of the main aspects of a regulatory State is the establishment of ad hoc national independent regulatory agencies (IRAs) having technical expertises, adequate resources and degree of autonomy to regulate the economy, as the US experience in 1970 – 1980 shows. In order to be effective, and capable of solving *"politicians' time inconsistent policy preferences, introduce technocratic Pareto-improving regulations"* (Hanretty and Koop 2009, p.2), regulators need to be guaranteed a certain degree of autonomy from the political power and economic interests. Without regulators' autonomy, flexibility of regulations cannot easily emerge. Moreover, administrative actions may be limited by countries' institutions. Thus, regulators' discretion may be limited in a way resulting in a total absence or very limited independence from political powers. Levy and Spiller (1994) pivotal study, proves the double impact countries' political and social institutions may have on defining the regulatory framework: countries' institutions may affect both the *"appropriate balance between commitment and flexibility"* (Levy and Spiller 1994, p.204) and the administrative arbitrariness. Thus, the balance between commitment and flexibility, as well as administrative discretion, influences the type of regulation that a country may implement, and its effectiveness.

With regards to MENA countries, the regulatory problem is not simply related to the existence of limits to administrative discretion. A part from the rupture represented, in certain cases, by the year 2011, MENA long-lasting regimes raise the problem of the continuity between élites in power and the administrative power. This continuity determines the need for understanding whether the institutions of MENA countries may really favour that degree of independence of regulatory agencies which is required for translating commitments towards regulation, into effective and credible regulatory framework.

In order to analyse the efficacy of regulatory processes and regulatory authorities' independence, the degree of discretion and autonomy in decision making need to be assessed. With this regard, an interesting case of study is the prices and tariffs' definition. Tariffs set-up by an IRA, indeed, reveals high level of agency's administrative discretion and mild forms of expropriation. At the same time, when tariffs are "*set down the long-run average costs*" (Levy and Spiller 1996, p.3), administrative expropriation emerge. Administrative expropriation impacts on the long-term performance of a company, affecting the expected return from investments, for example. This makes in the end difficult, when not impossible, a company to operate. An IRA that is effectively autonomous from the political power is capable of defining the level of tariffs that may assure the proper level of return on companies' investments. On the contrary, in those cases in which tariffs are set up by incumbents, or by IRAs under incumbents' influence, reveal a non autonomous and non independent IRA. The missing independence, thus, may favour cases of administrative expropriation. In these cases, investors will expect to be limited in prices they can charge, suffering an additional loss to sunk costs. Moreover, very low prices signal investors of the missing "*reassurance that future prices will be se a sufficiently remunerative level to justify investments*" (Joskow 2005, p.8). Such form of expropriation often "*ends up with public ownership of utilities, because the hazards of direct private investments are so great*" (Levy and Spiller 1996, p.3). Although data for MENA countries show a more positive environment for investments since mid-1990s (graph 1), forms of *administrative expropriations* may come out when analysing MENA countries institutional background.



The paragraph 2.1 summarizes the method for the institutional analysis as by Levy and Spiller (1996).

### 2.1 Assessing commitments to regulate the utility sector: the method for the analysis

In Levy and Spiller (1994), regulation is defined as a *design problem* having two main components: governance – the mechanisms that constrain regulatory discretion – and incentives – the rules on pricing, subsidies, networks access and exploitation. The choice between specific governance mechanisms and incentive structures are “*variables in the hand of policy-makers*” (Levy and Spiller 1994, p. 205), which choose on the base of nation’s *institutional endowment* (North, 1990). Thus, being the outcomes of the regulatory process mainly path-dependent, working endogenous mechanisms are the most relevant aspect to focus on (Glachant 2008). In this regard, the dimensions of a country’s institutional endowment that need to be assessed are:

- executive and legislative institutions ;
- judicial institutions;
- informal norms;
- contending social interests and their balance;
- administrative capabilities.

Firstly, as regards the executive and legislative of a country, these refer to formal mechanisms for appointing legislators and decision makers, laws design and implementation, and the way executive - legislative relations are regulated. Secondly, judiciary independence from political powers is one of the main dimensions of the rule of law; it makes potential investors confident on the seriousness of laws’ implementation and respect. Thus, mechanisms for judges’ appointment and for assuring their impartiality should be taken into consideration. Thirdly, customs, viewed as constraints to the action of individuals. Fourthly, the articulation of interests within the society, their balance, and the role of ideology should be considered as influencing the policies’ definition. Finally, the administrative capabilities of a country, which are described as the “*ability of the nation’s professionals to handle complex regulatory concepts and processes in a relatively efficacious manner, without triggering excessive disputes and*

*litigation*” (Levy and Spiller 1994, p.208). Strong administrative capabilities are positively correlated with the efficacy of regulatory system and, eventually, with a country’s capability to favour and attract investments.

Following the Levy and Spiller framework, the way the above dimensions should combine, in order to provide a positive environment for developing credible regulatory framework, is:

- explicitly separating executive, legislative and judicial powers, usually in constitutional text; thus,
- having a written constitution, which works as limits to the first two powers and is enforced by functioning judiciary;
- existing two elective chambers, being elected with different voting rules;
- having an electoral system, which allows opposition parties to emerge as counterbalance of the majority ones;
- a federal structure of the state, or strong decentralization of powers.

With this regard, credibility of regulation in the utility sector is higher in countries, in which executive and legislative discretions are counterbalanced, than in countries where such counterbalance does not exist or is weak. Consider, as example, the case of a country having a strong executive power over the legislative institutions: in this case providing specific legislation for the sector to be regulated is not a sufficient guarantee against administrative discretion, because of the legislative counterbalance is weak. Moreover, a strong executive may prevail on judiciary power in the interpretation of specific rules, eliminating *de facto* any kind of legitimacy control on specific provisions.

Once analysed, the five dimensions of institutional endowment, and their desired combination, mechanisms and pre-conditions for an effective regulatory framework may be defined as:

- *restraints on regulators’ discretion written in the regulatory system;*
- *restraints on changing regulatory systems, formal or substantial;*
- *independent judiciary.*

Under the first mechanism, we find “*process regulation or specific, substantive rules*” (Levy and Spiller 1994, p. 211). Countries, indeed,

may be distinguished between those requiring specific regulatory rules and those that can use more flexible regulatory processes. As regards the latter - countries using a flexible form of regulation - informal norms, administrative laws, and “*an institutionalised process of argumentation and consensus formation*” (Levy and Spiller 1994, p. 211) that restrains regulatory discretion are relevant aspects of the regulatory process. As regards the former - countries requiring specific rules to ensure credibility of regulation - the existence of strong administrative capabilities is considered.

The second mechanism, restraints on changing regulatory systems, refers to potentiality for changing regulatory system and is related to the degree of flexibility of the entire regulatory system of a country. In this regard, the political system of a country should be analysed considering the distinction between situations in which a credible regulatory commitment may be achieved through legislation, from those in which such credibility may be derived by licensing and contractual arrangements. In this regard, electoral, executive and legislative institutions are the core aspects to analyse.

The third, and last, mechanism refers to the existence of a functioning judiciary system, characterized by independence from political powers; thus, judiciary capability of *limiting the administrative arbitrary action*, is one of the main aspects to consider in the institutional analysis. The section that follows, reports the methodology for the analysis as adapted to our study, the results of which are included in the section 3. The methodological note in the Annex, variables generated by the study of MENA institutional endowment are described.

## 2.2 MENA Institutional Endowment: data collection method

With regards to MENA countries we have adopted, and opportunely adapted, Levy and Spiller framework for analysis provided in paragraph 2.1. Specifically, our analysis considers the following countries in the period 1990 – 2010: Morocco, Algeria, Tunisia, Libya, Egypt, Israel, Jordan, Lebanon, Syria and Turkey. The above analysed five dimensions of a country’s institutional endowment have been analysed collecting data on:

- countries' Constitutions or basic laws, in case of absence of a written constitution;
- anecdotic evidences on countries' political life in the period 1990 - 2010;
- indicators of governance and countries' stability.

In line with Tsebelis (2002), it is the Constitution and the political system of a country, that specify veto players. The first two points here considered originate specific variables, built on the framework analysis given by Levy and Spiller, and opportunely integrated with data from DPI 2010 and POLCON 2010 (see the Methodological Annex).

Firstly, data collected were directed at describing countries' institutional endowment on the base of:

- the presence of a written constitution, year of adoption and year of relevant changes/amendments impacting on the political system;
- States' organization, distinguishing between unitary and federal forms of the State. The presence of decentralized units of government (municipalities, districts) and their eventual role in managing natural resources, and natural monopolies, such as energy, has been also considered.
- States' regime, referring to the political regime as emerge by Constitutional provisions;
- The presence of religion as State religion and as source of law.

The existence, in Constitutional texts, of norms referring to property rights, expropriation and compensation rules have been considered. In this regard, all analysed Constitutions include such provisions referring to ordinary law for their effective implementation.

Secondly, we have deeply analysed countries institutional aspects looking at the following dimensions:

a) Executive and legislative institutions - These two institutions are fundamental in order to analyse the institutional limits to regulatory discretion. The analysis of Constitutions considers the following aspects:

- Organization of powers, distinguishing between:
  - o Chief Executive (i.e.: Head of State, Monarch, or Prime Minister depending on States' regime);

- Cabinet, the role of the Prime Minister, when different by the Chief Executive, and its party.
  - Parliament, considering elections modalities both for the low and high chamber, when two chambers exist, and their regularity as regards the low chamber; characteristic of both majority and opposition parties; parliament dismissal procedures and its veto powers.
  - Anecdotic evidences on elections and alternation in power.
- b) Countries judicial institutions - Aspects here considered are:
- the recognition of magistrates' independence by politics;
  - mechanisms for judges appointment and eventual dismissal;
  - the presence of ad hoc institutional bodies in charge of judges' career and their chief.

Such measures may give a first impression of potential for judiciary corruption. Moreover, the presence of a Constitutional Court, appointment and dismissal procedures, and the presence of other judicial bodies such as those related to religious matters, have been considered. With regard religion, and religious tribunal, it should be stressed that very often such bodies are involved in aspects characterizing the citizens' private life dimensions (family laws, mainly) and do not influence mechanisms for solving controversies between private companies and the State.

As regards the third and fourth dimensions identified by Levy and Spiller, c) informal norms widely accepted by the society, and d) character of contending social interests within a society, we develop our analysis referring to anecdotic evidences and specific indicators, as below reported. The third dimension has been analysed having regards to index of corruption within the political system, and extent of constraints to the Executives' action. The fourth dimension instead focuses on two actors' influence on the governments' action – religious groups and the army. We have considered the history of relations between the head of executive powers and the army, and role of the army in politics; religion and ideology of parties' formation, as allowed by Constitutions, and the eventual role of religion in politics.

Finally, e) administrative capabilities of a country, are considered looking at indicators of:

- regulatory quality;
- government effectiveness, and
- bureaucracy quality.

Sources of information for the letter e) and c) are the World Bank Worldwide Governance Indicators, and the International Country Risk Guide, mainly. These indicators, allow the description of how the quality of regulation, level of corruption and rule of law within a country are perceived. Countries' investment profile is also provided. The variables so determined, described in the Annex, define the *exogenous dimension* of a wider study on regulatory region, of which this paper is part. Such variables characterize countries' evaluation of the coherence between domestic system of energy rules and rules and principles promoted by international actors. In particular, being this study part of a wider research programme aimed at assessing the effectiveness of the EU as rules promoter in the field of energy in the southern neighbourhood, we take such considerations as pivotal for the definition of a potentially shared Euro-Mediterranean regulatory framework.

The following section describes Southern Mediterranean institutional background, useful for having a measure of the current processes of regulation with regards electricity and renewables mainly.

### **3. Mechanisms restraining regulators' discretionary power: the pre-conditions for a functioning regulatory environment**

In this section we provide a description of how the three mechanisms for restraining regulatory power identified in Section 2 may, or may not, work in the MENA regimes so identified:

- Presidential and Semi-Presidential Republics: Algeria, Tunisia, Syria, Egypt;
- Parliamentary Republics: Israel, Lebanon, and Turkey;
- Monarchies and *quasi-monarchical regime*: Jordan and Morocco, Libya<sup>10</sup>.

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<sup>10</sup> We consider the absence of elections in the Libyan Parliament, which is formed by representatives of local councils, as well as the absence of Chief executive elections, as determinants of the quasi-monarchical status (Emerson and Youngs, 2009).

With regards to the first dimension of the MENA institutional endowment quoted in paragraph 2.2, all examined constitutions formally recognise the separation of powers between political and judiciary powers, and between executive and legislative. With the sole exception of Israel, all countries have a written constitution. Moreover, two legislative chambers with different voting system exist in the two monarchies, Morocco and Jordan, and in Tunisia, Algeria and Egypt. The second chambers of the presidential and semi-presidential regimes have been strengthened by constitutional reforms of the second half of 2000s. Such reforms, initially described as the result of political liberalization, reveal their nature of façade change (Ottaway 2008): Aimed at guaranteeing Presidents permanence in power, the 2000s environment is characterized by *constitutional retrogression* (Marx 2010, p.485). In those cases in which a second chamber exists, indeed, it is partially elected by voters and partially by Chief executive (Egypt) or formed by people having certain characteristics such as members of local councils, members of professional chambers (Algeria and Tunisia). Modalities of second chamber elections have been directed at consolidating the King and its entourage in monarchical regimes: it is entirely named by the King, for Jordan, or formed only by people having certain characteristics as above in Moroccan case. Finally, no MENA state has a federal structure of power. Although the existence of decentralised level of administration, local authorities' powers over tax and spending legislation exist only in the Egyptian and Moroccan case.

The part of the study that follows, focuses on the study of the formal system of power; thus, restraints written in the regulatory framework of a country are considered in the form of executive and legislative powers organization, and their relations and reciprocal veto powers. Then, the role of the judicial power and administrative capabilities, for each country, as well as the level of corruption, are considered. In the end, the role of the religion and the army are considered as a case of contending social interests and potential veto powers external to the formal system of power. Graphs and tables quoted in this section are reported at the end of the paper.

### 3.1 Executive and legislative powers

Having regards to the executive and legislative powers, we have analysed:

- the existence of rules allowing for parties dynamic to emerge and, as a consequence, restraints to regulators' discretion in the electoral framework to be identified;
- the power of vetoing such rules by executive towards the legislative powers and vice versa;
- how such formal vetoes can be defined and which are the most interesting cases for the analysis.

Graph 2 shows the number of years Chief Executives and their parties have been in office in the considered regimes, except for the two monarchies being the Chief executive a non-elected body. Straight lines show continuity in the majority of cases. Such linear relations, have been further confirmed considering that the executive party, in the same period, controlled the entire Parliament even when two chambers exist, as in the Egyptian, Algerian and Tunisian case. Moreover, as regards the mandate termination and number of mandates of Chief executive, constitutions allowing for a second mandate are only the Algerian and Israeli one; Tunisian, Lebanese and Turkish constitutions, are the sole cases that do not explicitly allow such possibility. In the Egyptian case the possibility of a second mandate has been introduced in the constitutional text adopted in March 2011, in the aftermath of people uprising. Despite such provisions, Presidential regimes have been characterized by long lasting leaders. On the contrary, the Parliamentary Republics, Israel, Lebanon and Turkey, have been characterized by high governments' instability. The higher degree of stability registered by Presidential regimes compared to the one of Parliamentary regimes is evident also in terms of regularity in the Parliamentary elections (graph 3): it is higher in the former than in the latter case. The flat line of Libya is due to the absence of elections. Considering the relevance of elections for functioning check and balance between political forces, and emergent majority-opposition parties' dynamics, we have considered the presence of absolute majority in the houses, and legislative and executive veto powers. With the exception of Parliamentary regimes, other regimes are



characterized by absolute majority of the executive party. Regarding veto power, the Chief executive emerges as the strongest one. Specifically, in presidential and monarchical regimes he acts as the unique veto power towards the Legislative, the Cabinet behaving like agency acting on behalf of the head of executive powers instead of a body having the agenda setting power. Moreover, the Chief executive appoints and dismisses the Prime Minister, with the exception of Lebanon; he can veto legislation and may dismiss the Parliament even without motivation, as in the Egyptian and Algerian case. Thus, MENA countries show an articulation of powers in which the Government and the Parliament are squeezed by strong Chief executives, in monarchical and presidential regimes mainly. Although limited available observations, the graph on the extent of executive constraints and veto points confirm our analysis.

With regards to Parliamentary republics, the extent of such vetoes is highly influenced by fragmented political scenario; such limits are more evident in the Lebanese case than in the Israeli one. Indeed, during the period 1992 – 2001 Israel adopted a presidential regime system that let its executive veto powers increase (graphs 4a – 4b). Presidential and Monarchical regimes favour a higher degree of incumbents' discretion than Parliamentary regimes, especially when majority-opposition parties' dynamics does not work. Incumbents' freedom of action result of policies defined on the base of Chief executives' wills more than on well assessed needs of a country. The Parliamentary regimes of MENA region, although strong executive veto powers, are characterized by a more genuine check and balance and alternation of parties in power. In these cases, the analysis reveals a high level of system instability and often weak ruling majorities, as for Lebanon and last years in Israel. In these last cases, we should be in presence of commitments to regulate that are expression of a more shared views than in the monarchical or presidential cases. Nonetheless, high political instability may make the translation of such views into effective regulation difficult. For Parliamentarian regimes, thus, such as for the other regimes in the region, the evaluation of other veto players is necessary.

### 3.2 Administrative capabilities and the judiciary power

Formal restraints on executives' discretion can be defined weak in all those countries not having democratic features such as an electoral system that, despite elections regularity, favour alternation in power of different parties and guarantee a functioning legislative power in terms of rules definition. In this regard, if *"veto players are those whose agreement is necessary to change the status quo"* (Gilardi, 2005a p.91), not many veto players emerge from the analysis of executive and legislative powers in MENA area. The POLCON V index reported, measuring the extent of veto powers within a political system, close enough to Tsebelis (2002) concept of veto players, is in line with the outcomes derived by anecdotic evidences. Even in case of MENA parliamentary regimes, characterised by high political instability, veto players should not be so effective if it is true that *"policy stability increases as the number of veto players increases"* (Gilardi, 2005a p.91). Thus, the analysis takes into consideration the extent of other two formal limits to incumbents' discretion that may eventually behave as veto powers affecting the rules implementation: a country's administrative capabilities and the judicial power. As regards administrative capabilities, we have considered as a measure of MENA administrative capabilities the quality of bureaucracy, the perceptions of the quality of public services, and executive capacities in formulating and implementing *sound* policies as reported by International Country Risk Guide and Worldwide Governance Indicators of the World Bank indicators. In addition to that, considering Levy and Spiller's definition of administrative capabilities as the capacities expressed by the professionals within a society to confront with complex ruling systems, we have analysed the level of enrolment in tertiary level education (i.e. secondary school and university), controlling for the percentage of GDP expenditure dedicated to tertiary education (graphs 5a – 5e). Values of regulatory quality and government effectiveness almost coincide, showing the relation between the two powers as they are perceived. Moreover, bureaucracy quality confirms to be high only in the Israeli case.

These data confirm what has been assumed on the role of bureaucrats as pivotal for the regulatory effective implementation. In

the end, it performs better than the regulatory capabilities of implementing policies, as people perceive it. Such data seem to be confirmed by average GDP expenditure dedicated to education at the highest level, while people enrolled in tertiary education is high for almost all examined countries, except Algeria.

With regards to the judiciary independence and powers, we firstly refer to Constitutional provisions, grading 0 those Constitutions not mentioning judges independence from both political and religious power. Moreover, based on the analysis of Constitutional texts, the variable referring to magistrates' independence refers to methods for magistrates' appointment and dismissal too. It looks at magistrates' appointment and careers decision. The dummy variable obtained, thus, register 1 for those cases of formal independence and appointment-dismissal decisions taken by judiciary bodies, and 0 for cases of missing mention of independence in Constitutional texts and appointment-dismissal decision taken by the political power mainly (graph 6). Then, a measure of rule of law is reported for each country (Worldwide Governance Indicators, the World Bank), as it varies in the considered period (graph 6): the chosen indicator measures the degree of confidence towards the country's rules and their implementation, the courts system, the degree of contracts and property rights enforcement. Even in this case, the registered scores, with the exception of Israel, are not so high showing a low degree of confidence in the functioning of the ruling system. This is extremely important for those cases that are currently at the centre of new projects for renewable, thus new investments. Morocco, which recognizes formal independence of the magistrates, registers very low levels of rule of law. The same differences between formal and substantial independence and functioning of the judiciary system are given for Algeria and Egypt. While, Jordan, in which the King has a central role in appointing judges, show higher level of rule of law compared to the other countries in the region. Considering that the indicator reported refers to capabilities of contracting enforcement, property rights, and correct functioning of the courts, it is a relevant measure of our study aimed at describing the investment environment of MENA countries and

existing potential threats, such as nationalization and administrative expropriations.

The functioning judicial and administrative powers, their weaknesses and strengthens, as well as their involvement in last years liberalization and openness of the economy, are further described having regards each specific country. Specific sessions on existing regulatory restraints for Libya and Syria have not been developed due to lacking information.

### *3.2a - Presidential and Semi-Presidential Regimes*

#### The Arab Republic of Egypt

Almost 6 million people work for the Egyptian public sector, 300.000 having temporary contracts (NIS Report, Egypt, 2009 p.88). Since the 1950s, the State is highly committed towards hiring in the public administration the most qualified people. Viewed as a tool for absorbing qualified un-employers and unemployment in general, the public sector became huge in terms of dimension although lacking resources. Its dimension makes monitoring function almost impossible. Moreover, low wages increase potential for corruption. The public sector suffers of the political influence, in particular in the personnel selection phase and in the career process, both at the central and local administration level. Considered the difficulties in controlling such huge apparatus, bureaucrats gained a degree of autonomy of action that very often consists in a non neutral management of public resources and strong *interactions with the business sector* (NIS Report, Egypt, 2009 p. 89). It emerge a bureaucracy having power of control on the country economic life. In this regard, the process of economic liberalization has not reduced such power although creating a sort of regulatory culture. In the aftermath of the 1990s worldwide promoted liberalizations, in 1991 the Economic Reform and Structural Adjustment Program (ERSAP) were adopted in order to favour the economic liberalization of the country. Although state owned enterprises still play a relevant role, Public-Private Partnerships widespread specifically in the utilities sector. The Partnership's strategy started effectively in 2006 and since then almost 22 projects and total investments of 15.35 million of US dollars has been achieved. From late

1980 to mid 2000s the participation of private sector in the economy has been increased from 40% to 55% (OME, 2011 p.19). Improvements should be registered also in the field of administrative law concerning public procurement and contracts; the Tenders Law n. 89 approved in 1998 stopped bids negotiation after bid opening, confirmed the need for providing duly justified reasons for cancelling the bid, address conflict of interests. Still it provides for a preferential regime for Egyptian companies, reserving them 15% of preferences. One of the controversial aspects is the missing length of procedures, which reduces transparency. With regards to the judicial power, Egyptian constitution recognizes magistrates' independence, although such independence is not effectively implemented. In a country in which salaries are low for key sector such as magistracy and bureaucracy, corruption is very high. The Supreme Judicial Council (SJC), should be in charge of judges' career and improvements, although there is a strong continuity between the executive powers and the SJC leading persons. In coincidence with the 2005 political liberalization phase and parliament elections, former President Mubarak mentioned the possibility to adopt a new law aimed at improving judiciary political independence and provide for the implementation of article 88 of 1980 Constitutional text in which judges are defined as observers of electoral fairness. Although the numerous electoral infractions registered in 2005 elections by judges, no concrete actions were adopted by the ruling party (NIS Country Report on Judicial Corruption, 2009 p.202). Thus, independence has been not effectively implemented. As for the political liberalization phase even the fight for judges independence went lost, as well as the one for effective fight against corruption of both judges and bureaucrats.

### The People's Democratic Republic of Algeria

Conceived as an instrument in the hands of the ruling class, Algerian bureaucracy is mainly an executive agency directed at implementing public-driven economic development. Bureaucracy, thus, developed in parallel with an economy mainly centred on oil and gas resources, disregarding socio-economic conditions. In 1980s the economic crisis associated to oil made evident the social discontent, bureaucracy and

the political power stability were threatened and a period of high domestic instability started. Contrary to Egypt, Algerian bureaucracy was not a low skilled one; the current economic reform in favour of private sector and new companies creation being mainly managed by bureaucracy. *"These reforms are aimed at making it easier to create companies and to improve the regulatory and judicial framework, investor protection"* (African Economic Outlook, 2011). Nonetheless, being bureaucracy dimension huge, *"delays and transaction costs linked to the administrative formalities"* still negatively impact on the economic life (African Economic Outlook, 2011). The direct relationship between bureaucrats and the political power, established at the time of independence from the colonial power, never broke up; it affects even the new regulatory environment in terms of lacking transparency and corruption. Algeria is ranked 105 out of 178 countries in the 2010 Corruption Perceptions Index. Such as the Egyptian case, the new regulatory framework for investments establishes a preferential system for Algerian companies and obligatory participation of foreigners in association with local enterprises. A certain degree of independence to magistracy has been guaranteed after 1989 Constitutional reform. In 1989 a Law on the Status of Judges and Law Officers established the judiciary as an *autonomous power*; independence was then sanctioned in 1996 constitutional amendments. Although such formal independence, the President is the head of judicial power. It is the head of Supreme Judicial Council (CSM), a disciplinary body with limited autonomy, which is co-chaired by the Ministry of Justice. As in the article 72 of the Constitution, the President has the power to transfer or promote judges. Effectively, such decisions are taken by the Ministry of Justice which decides also on officers' career (Executive decree 05/92 of 24 October 1992 quoted in NIS Country Report on Judicial Corruption, 2009 p. 173). Criteria for judges and officers' career are not clear or transparent; the CSM meets at closed door when taking such decisions. Moreover, corruption is also very frequent and there is no monitoring on that; the CSM having no monitoring power. Finally, the CSM is not autonomous since the financial point of view and the number of its members is limited to 17 of whom only six are judges and law officers elected by their peers. Only after 2006, the number has been increased

and the law approved an increase in judges' salary, in order to avoid the corruption temptation. Nonetheless, a judge's monthly salary is the equivalent of only US \$720 in dinars, lower than the average for judges in Morocco and Tunisia (African Economic Outlook, 2011).

### The Republic of Tunisia

Lacking information on the administrative system, and the interaction between the public sector and the country's economic life, characterizes Tunisia. The 2011 people uprisings and political change originated by high level unemployment and corruption in the public sector, reveals the strong relation between the Ben Ali regime, which lasted almost 23 years, and the bureaucracy. The most important event in terms of renovating public administration was the adoption, in 1996, of the *Plan de Mise a Niveau de l'Administration*; sponsored by the EU, the Plan had to favour public administration changes in line with necessities of a market economies, which the state started to promote at the end of 1980s. improving competencies, efficiency and establish a trust-based relationship with the citizenry were the pillars of the Plan. An assessment of the plan's implementation degree is missing; the EU documents on advancing cooperation with Tunisia remaining vague. It should be recognised that, although the state-centric administration of economic life, public sector corruption, and concentration of wealth in the hands of the Ben Ali family and its entourage, Tunisian economy performed better than other MENA countries (Freedom House, Tunisia, 2011 p.12). Tunisia, like Egypt and Algeria, guarantees judicial independence formally in the Constitutional text, but the President chairs the Superior Council of the Judiciary (SCJ), which appoints judges. Despite a relatively efficient judicial administration, impartiality of verdicts is highly questioned specifically when referring to eventual regime opponents. Appointment and dismissal procedures are arbitrary, and do not follow meritocratic criteria (Freedom House, Tunisia, 2011 p.11).

### 3.2b - Monarchies

#### The Kingdom of Morocco

Morocco defines public employee as *“agents nommés dans des emplois permanents et titularisés”* (NIS Country Report, Morocco, 2009 p.66); it does not define them as officers or functionaries. In 2006 almost 500.000 people were employed in the public sector, an amount reduced after *Intilaka*, the plan for voluntary retirement, approval. Officers are chosen on the base of public selection process, with the exception of high officers appointed by the king and its entourage. A certain degree of continuity exists between the high level of public administration and the political powers, while at the low administrative level officers may be easily influenced by the *cadeaux* system. Formally speaking, *“cadeaux”* are not considered as a symptom of corruption within the Moroccan system, with the exception of those presents given in coincidence with the conclusion of certain procedures. Even the management of the economy and the efforts of privatize it lack transparency. Privatization has been approved by decree and not by law, which implies that such provision is weak when compared with previous and future laws. The process of managing the passage from public to private sector missing clarity too. Morocco, sanctions formally independent judiciary by political powers, and judges' professional life is ruled and monitored by the Superior Council of Magistrates (CSM) which has more power than similar bodies by presidential systems of the region; it is more independent and has even more resources. Almost all judges in CSM are elected by their peers, *“but it is the King of Morocco, who presides over the CSM and who has the last word in making decisions”* (NIS Country Report on Judicial Corruption, 2009 p.233). The judiciary administration is concretely conducted by the Ministry of Justice *“minister has primary responsibility for the general administration of justice, judicial budgeting and the management of human resources, including the careers of judges with administrative functions at ministry and in the wider bureaucracy”* (NIS Country Report on Judicial Corruption, 2009 p.233). The limits of the judicial powers in front to the executive discretion emerge often with regards investments in strategic sectors, and the potential involvement of executive entourage.



### The Hashemite Kingdom of Jordan

As for other MENA countries, the public administration has been considered for many years as unemployment and social shocks absorber in Jordan too. The civil sector is the one absorbing the largest part of budget expenditure for public administration (70%, as reported by UNDP data in 2004). In 2002 a new law adopting public sector code of conduct establish meritocracy as the main criterion for public officers career development. Jordan monarchy has a tradition in training public employees in the Institute of Public Administration; the Civil Service Bureau responsible for training courses has a special programme also for abroad training<sup>11</sup>. In this regard, Jordan realizes one of the commitments of many other MENA countries: having a trained and well formed bureaucracy capable of implementing also economic reforms. The government is implementing a huge programme for investments in which foreign companies will be included too: it concerns infrastructures and utilities, electricity and renewables mainly. The projects have to be implemented through public-private partnerships. As reported by Freedom House, *"few if any steps have been taken to tackle the primary sources of corruption, weaken extensive patronage networks, or consistently punish high-ranking officials"* (Freedom House, Jordan, 2010 p.14), being patronage one of the methods used by the king for *"building support among key social groups"* (Freedom House, Jordan, 2010 p.14). Transparency International ranks Jordan 47 out of 180 countries in its 2008 Corruption Perceptions Index. An Anti-Corruption Commission exists since 2006 and its members have formally speaking a free mandate, although entirely appointed by the King. Considering judiciary independence, Jordan is one of the two cases within the MENA area in which religion impact also on the organization of judiciary system with religious courts mainly in charge of familiar and private life aspects. Both Muslim and Christian have their own tribunals. As regards civil courts, instead, judges are appointed directly by the King or by the High Judicial Council (HJC), whose own members are appointed by royal decree. The king and the

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<sup>11</sup> UNDP - The UNDP Role in Public Administration Reforms in the Arab Region (6/2003).

HJC jointly decide on judicial dismissals and career, while the Ministry of Justice has the power over the judiciary organization system and other, administrative mainly, staff. In 2003, the government adopted the Judicial Upgrading Strategy *“but it did not reach higher level of transparency nor judicial independence”* (Freedom House, Jordan, 2010).

### 3.2c - Parliamentary Regimes

#### The Lebanese Republic

Lebanon is the case of weakest public administration, on which the human resource factor impact not just in terms of expertise but in terms of religious and ethnical composition of bureaucrats. Public officials are selected on the base of sectarian, instead of meritocratic, criteria. Available posts are equally divided between Christians and Muslims, disregarding the existing other ethnics and religious minorities. A civil service board should monitor impartiality of the sector and the possible political interference but it is weakened by lacking resources and expertise. Religious and sectarian criteria are followed in the selection of high officials too. Having regards to the management of economy and public contracts, the Public Contracting System is defined non transparent: it *“suffers from clientelism, whereby political leaders take advantage of their position to promote the interests of their own communities”* (NIS Report, Lebanon, 2009 p.87). The tenders’ administration has been established by decree in 1959; its enforcement value is very weak and Lebanon registers the worst situation in terms of transparency among other Middle East like Morocco, Tunisia, and Jordan (NIS Report, Lebanon, 2009 p.87). In addition to Jordan, Lebanon is the second country on which religion directly impact on judiciary organization. Although recognized as a well functioning system, Lebanese judicial branch also suffers limits on its independence. Specifically, as for the public administration sector, the sectarian division of powers within the country makes independence and transparent judicial sector at risk. It is the Judicial Council that appoints judges. Independence from the political power is highly questioned, as the 2006 Hariri assassination, and the subsequent release of involved intelligence officers, show. Such influence is also evident with regards to external influence, mainly Syrian one, on both political power and the judicial system. Judges and

other judiciary officials are appointed on ethno-religious lines; efficiency is not guaranteed by selection procedures based on merits. In line with all other examined countries, dedicate to the sector poor economic resources is the way the judicial power is weakened (Freedom House, Lebanon, 2010).

### The State of Israel

Israel is the most developed country in the area, although obtaining information on its domestic structures and organization of powers is not an easy task. As regards the quality of human resources, Israeli profits of a high level of tertiary education; human resources in public administration are further trained by the Civil Service Commission. Moreover, a specific unit in charge of quality improvements exists within the Commission and is dedicated to organisational improvements. Israeli bureaucracy apparatus is also defined a *political* bureaucracy; a large apparatus very well present in the economic system of a country due to a well established system of patronage. Israel, as the second parliamentary system considered, does not suffer of endemic corruption; being more the case of isolated cases of *“judicial impropriety, coupled with the perception that political forces have attempted to influence important decisions”* (NIS Country Report on Judicial Corruption, 2009 p.218). Nonetheless, limitations to judicial independence are also present: four of the nine members of the judges’ selection committee are political representatives. Moreover, in the last years very often politicians have attacked judges, the Supreme Court specifically, due to pronunciations in some controversial cases (NIS Country Report on Judicial Corruption, 2009). What seem really affecting the judicial power is nepotisms and strong familiar relationship in between judges and attorneys.

### The Republic of Turkey

Turkey is the sole country within the MENA area candidate to EU membership and, consequently, it has to harmonize its own ruling system to the one recommended by the Union. In this regard, reforms of the public sector as those concerning the economic life follow the need to implement the EU body of laws and regulation, the *aquis*

*communautaire*. In order to make such changes effective, corruption should be dismantled and the public administration still need to improve efficiency. In this regard, a reform adopted in 2003 by the AKP premier Erdogan had as main pillar to “*promote a more transparent management of human resources in the public service and to strengthen the fight against corruption*” (UNDP Report, Turkey, 2004 p.11). It should be considered that selection criteria for public offices are not mentioned in the ordinary laws. Thus, Turkey too confirms the general MENA tendency in using public sector as unemployment and economic shock absorber, generating an inefficient and expensive sector largely affected by corruption. Although premier Erdogan initial commitments, even AKP party enjoyed the system of patronage relations (Freedom House, Turkey, 2011 p.12). Transparency International 2010 ranks Turkey 56 out of 178 countries, with a score of 4.4 on a 10 point scale. In Turkey, as MENA countries already proved, the direct relationship between ruling class and bureaucracy weakened any efforts for improving economic situation and transparency within the country. Despite pervasive corruption, Turkey has a functioning market economy favoured by deregulation and privatization of state companies, in the energy sector too (Freedom House, Turkey, 2011). Finally, Turkey in which the Constitutional Court has always defined itself as “as the guardian of the integrity of the state and a bastion of the secular political establishment” in contrast with AKP recent positions and the 2010 reforms of the Constitution. The number of the judges of the Constitutional Court, although increased from 11 to 17, is so composed: 4 members directly appointed by the President, 10 chosen by the President from a list of nominees, and 3 are elected by Parliament by a simple majority vote. The list of nominees is composed by people selected by a different judicial bodies and the Higher Education Council. Nonetheless impartiality is at risk considering the AKP majority in both legislative and executive powers (Freedom House, Turkey, 2011 p.10).

### 3.3 The religion and the army power

The last part of the analysis considers other two veto points, usually external to the formal interaction of executive-legislative powers, which

in MENA case may have a peculiar relevance: the religion and the army. MENA Constitutions allow political parties mainly; religious parties are permitted only in Lebanon and Jordan. The possibility of religious parties has been recognised in Egypt, Tunisia and Morocco after the 2011 people uprisings, while before religious candidates always compete in elections as *independent* candidates. Thus, although recognising mainly Islamic (or Jewish) religion as the State religion, the majority of countries in the considered period, do not authorize religious parties to take part in elections. These results are further confirmed when considering ideology of the Chief Executive party (graph 7). Thus, religion does not characterise the regulatory framework and utilities' liberalization, at least for those years considered in this analysis. The exception could be given by Lebanon and Jordan, due to religion as criteria for selection and career advancements in the public administration.

How the role of religious groups may change and affect economic reforming processes after 2011 events rests to be analysed. The victory of Islamist parties in Tunisian, Moroccan and, lately, Egyptian' elections question the maintenance of current patronage system of relations and potentials for changes; it may allow multiplying veto positions, or their further reducing with the consequent increasing uncertainties on the regulatory commitments and the processes of liberalization of these countries.

A second veto power here considered is the army. MENA countries Chief executives of the period 1990-2010, have strong relation with the army. Very often politicians never break a relation started at the time of post-colonial period, as showed by the fact that almost in all considered cases the head of executive powers is a former member of the army (graph 8). Moreover, analysed constitutions state the obligatory military service for those who are or aspire to be Chief executives. In this regard, we consider Chief executive party ideology, anecdotic evidence concerning army involvement in politics, and an indicator of military involvement in politics (ICRG) viewed as takeover or risk of takeover (graphs 9a-9b). The data reported confirmed the role of the army as relevant and important actor, more than the existent religious groups and eventual parties religious orientation. In this regard, we

argue that the army represents one of the groups of interest capable of influencing the definition of specific policies, like those related to natural resources, being strongly related to Chief executives. Currently, in the aftermath of 2011 people uprisings, the army has a specific role in managing the political life as well as the *transition* phases as for Egypt and Tunisia even though with sensitive differences. As already stressed by Rustow (1967), army involvement in politics is symptomatic of non correctly functioning of civil and political institutions. It is the weakness of countries' political institutions that makes the army's intervention in politics stronger and transforms threats of takeover in concrete events. Thus, in MENA countries where the most effective political institution is the Chief executive, the army has more room for manoeuvre than in situation in which institutional powers are counterbalanced.

#### **4. Electricity sector in Southern Mediterranean countries**

In this last part of the paper, we report the results of a dataset that includes information on the electricity sector mainly, the existing regulatory framework and competences of IRAs of MENA countries, when existing, as provided by the existing literature. The reference period for the analysis is still 1990 - 2010. Our analysis considers the potential for existing commitments towards electricity sector liberalization. Thus, *liberalization* has been registered as a binary variable (yes or no) when the followings events have been recorded: sector's unbundling, regulated TPA regime, and IRA set-up. Tables at the end of chapter report the mentioned elements of sector liberalization, when present. At the same time, tables provide a description of regulatory restraints for the countries under analysis having regards the energy sector. Information provided consider incentive mechanisms (rate-of return vs. price-cap) when existent, license discipline and eventual relevance of contracts on administrative law, the role of judiciary *vis a vis* the government and regulatory companies. In this regard, the institutional analysis above reported has been also taken into consideration as determinants of MENA regulatory restraints.

Considering the first aspect analyzed, liberalization commitments, countries having established an IRA have, with the sole exception of Algeria, introduced a functional unbundling of the sector and adopted a regulated TPA regime. These countries, Turkey, Israel, Algeria, Egypt, and Jordan, have established an IRA during 2000s. At the same time all of them, as also for countries in which an IRA has not been established, maintain strong state-owned companies, vertically integrated; thus, generation, transmission and distribution are still in the hand of one sole actor. Moreover, having specific attention to the role of IRA and to what we reported in previous sections in terms of administrative discretion and IRA's decision making autonomy, tariff setting is the aspect mainly considered. Indeed, tariff setting is still managed by incumbents in the majority of cases, with the exception of Israel and Turkey. In the latter case, the IRA may review and approve tariffs, while in the former case it may set them. With regards to other competences, all IRAs may take decision regarding license issues and dispute settlement.

To a first extent, thus, we may confirm that commitments towards liberalization, and a more clear regulatory framework, emerge in those cases in which an IRA has been already established. Nonetheless, existing IRAs suffer of limits to agencies' autonomy and independence. The situation described in the tables confirms that restructuring the electricity sector is proceeding in all those countries which have already established an IRA, although at different speeds and with different characteristics which depend on the domestic institutional environment. In this regard, Jordan and Turkey seem fast moving towards liberalization of the sector, having unbundled the sector between the end of 1990s and the first years of 2000s; both have adopted a regulated TPA regime under IRA supervision. As regards IRA functions, licenses and dispute settlement are the main operational aspects while tariffs' setting is under IRA competences only in the Turkish case. Algeria and Egypt share the characteristics of unbundling with the two other countries examined; unbundling mainly consist of functional separation between generation, transmission, and distribution. The model of TPA regime adopted is not clear and IRA does not have high degree of independence. Being not competent on

tariffs setting and TPA regime, Egyptian and Algerian IRAs correspond to an advisory body of the government. The Egyptian regulator, for example, is competent on licensing issues, but it has mainly a consultative role concerning the TPA regime, dispute settlement, system quality and consumers' protection. Tariffs, both in the Egyptian and Algerian case, are defined by the executive power. The agency role, thus, substantiates in monitoring powers related to the mentioned competences, which are directly managed by the government and by holding companies. Regulatory restraints analysis confirms weaknesses of judiciary and legislative power in counterbalancing incumbents' discretion. Only in the Turkish case, courts are asked to resolve controversies between the government and stakeholders, and are involved in case of appeal against IRA decisions.

## **5. Conclusion**

The paper analyse and adopts, with opportune changes, the methodological framework of institutional analysis by Levy and Spiller. This paper enlightens characteristics of the three main restraints to regulators' discretion that MENA countries experience. Considering the executive-legislative relations, defining regulatory commitments which reflects the wider social interests is difficult for presidential and monarchical regimes, by virtue of lacking majority-opposition parties dynamic relation and missing legislative veto powers. Thus, we expect that the regulatory framework when formulated is characterized by rigidity and inefficiencies. The same rigidity may emerge in cases characterized by two party systems with frequent alternation in power, such as for Israel and Lebanon.

The closeness between the public administration heads and the executive leaders is evident in all considered cases: the civil service grown up in continuity with growing power of ruling élites in countries in which the economic sector is still almost entirely in the hands of the executive power. In such a context there is no information asymmetry between the ruling class, with its officers within the administration, and the market operators considering companies being mainly state-owned and ruled by boards very close to the executive



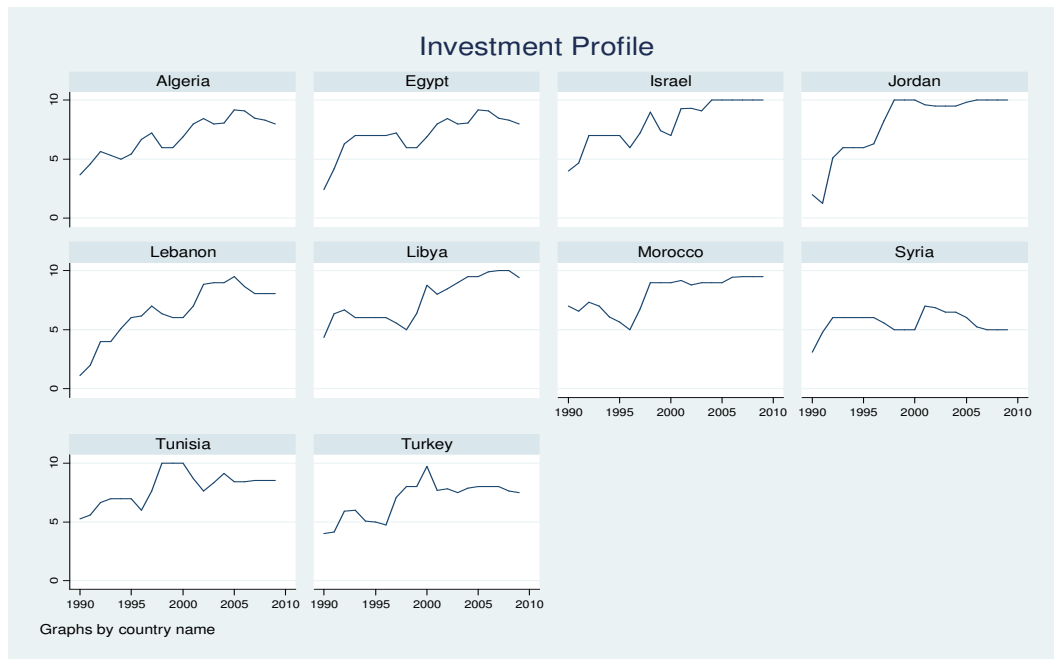
power. Thus, the framework here defined is the one of few veto players, and vetoing positions at institutional level, which may be detrimental for potential new market entrants.

At the same time, it is the bulk of administration that has developed regulatory expertise during the years and that can effectively implement regulatory reform. Mainly due to the process of privatization that started in the 1990s, public administration as in the Algerian, Jordan, Moroccan and Turkish case reveal such capabilities, contrary to other countries, such as Lebanon. To a first extent, Jordan seems to be the most promising case in terms of electricity regulation and restructuring of the industry considering the role of bureaucracy and its capabilities in implementing reforms, although missing democratic features and poor judiciary independence. Staying in the Mashreq area, Lebanon seems to be the less promising case: it is a parliamentary republic sharing democratic features, but characterized by high level of political instability due to ethno-religious parties division and the role of external actors (Syria mainly) on the political life of the country. Israel is a case of more stable country, with stable democratic institutions in which both the army and religion have been included in a well consolidated institutional system. Israel registers a high level of administrative capabilities and a more independent judicial power too. Having regards to the area that goes from Egypt to the entire Maghreb, presidential and semi-presidential regimes can be defined as rent-seeking regimes having a rent-seeking bureaucracy, and poor resources dedicated to a judiciary power not always truly independent. Algeria and Egypt have very similar features in terms of regulatory restraints mechanisms and share the same political trajectory of promoted political liberalization between 2005 and 2007, its suppression, and people uprising in 2011; the outcomes of people uprising in terms of democratic changes is highly questionable in both cases. Moreover, both register cases of judges pronouncing against the ruling party or President. Tunisia is characterized, in the years considered in the study, by strong authoritarian power and lacking independence of judiciary power; contrary to Algeria and Egypt, it better off performs in economic terms. Moreover, considering the peaceful transition to the new government, we would argue that even

military power is included in institutionalised system of rules contrary to the Egyptian situation where such power is more pervasive and less submitted to the rule of law. Morocco, is the most controversial case of monarchical regime in the region. At the centre of current interests on renewables, it seems characterized by a reforming spirit which risk to be limited by monarchical structure of the state and continuity between royal entourage and the incumbents.

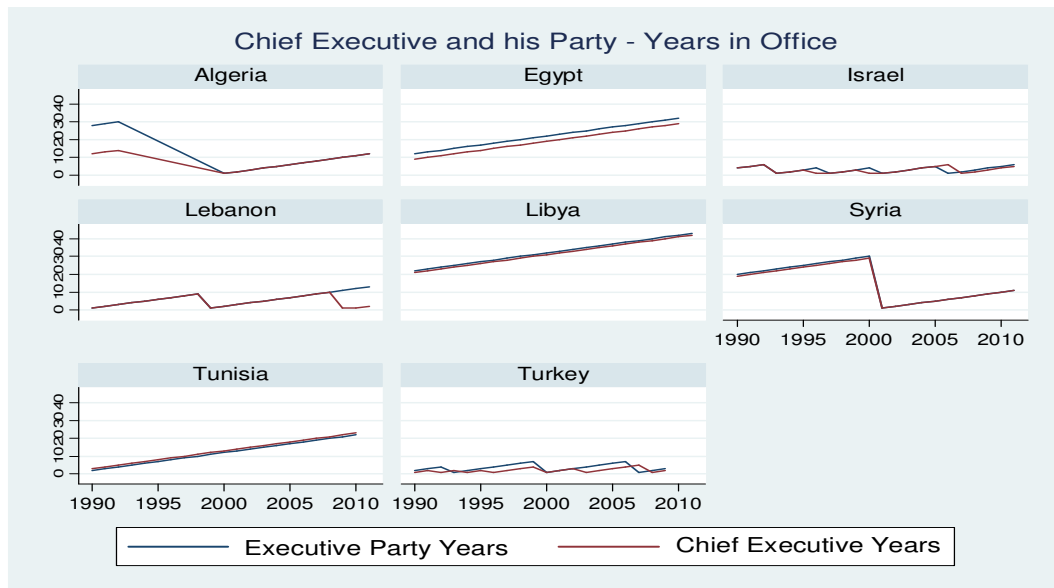
The data on the institutional endowment of MENA countries have been useful to the analysis of the electricity sector organization and effectiveness of the regulatory framework as it is reported by the main literature on the argument. First findings of the study show that, those countries having established an IRA are more advanced in the electricity sector restructuring, although it does not imply liberalization of the sector and reduction of the incumbents' discretion; the latter being stronger where closer relation between bureaucrats and executives exists, undermining agencies' independence.

## Graphs



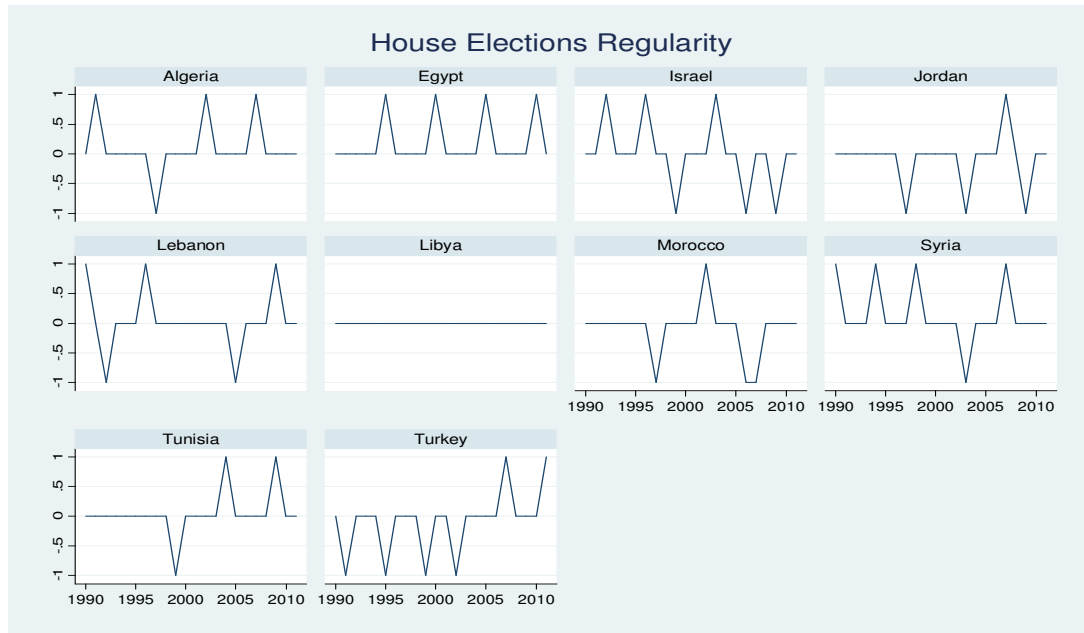
**Graph 1:** Investment profile

**Source:** International Country Risk Guide - ICRG



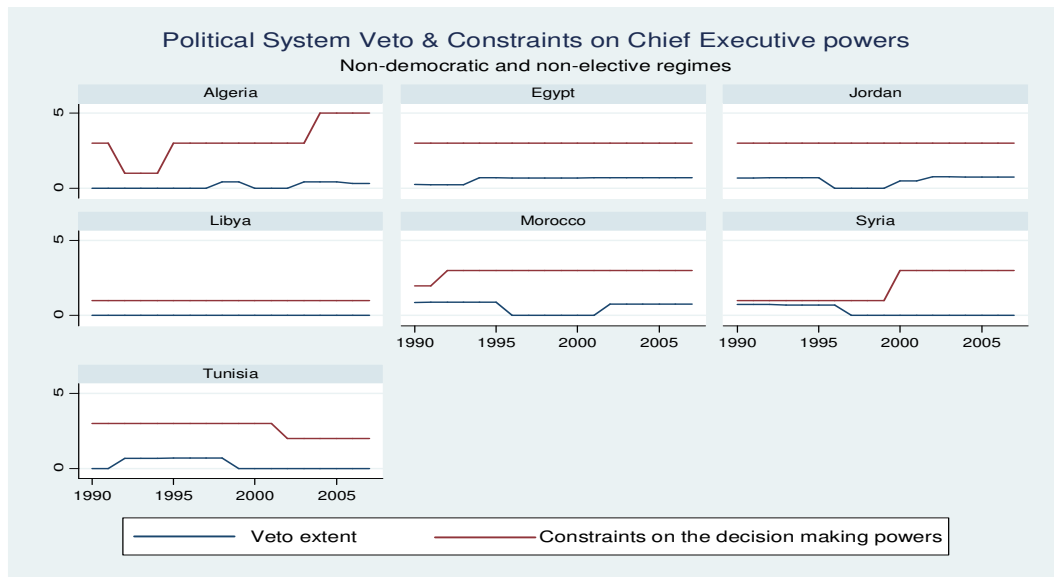
**Graph 2:** Chief executive and Chief executive party years in office

**Source:** Anecdotic evidences; Database of Political Institutions - DPI, World Bank



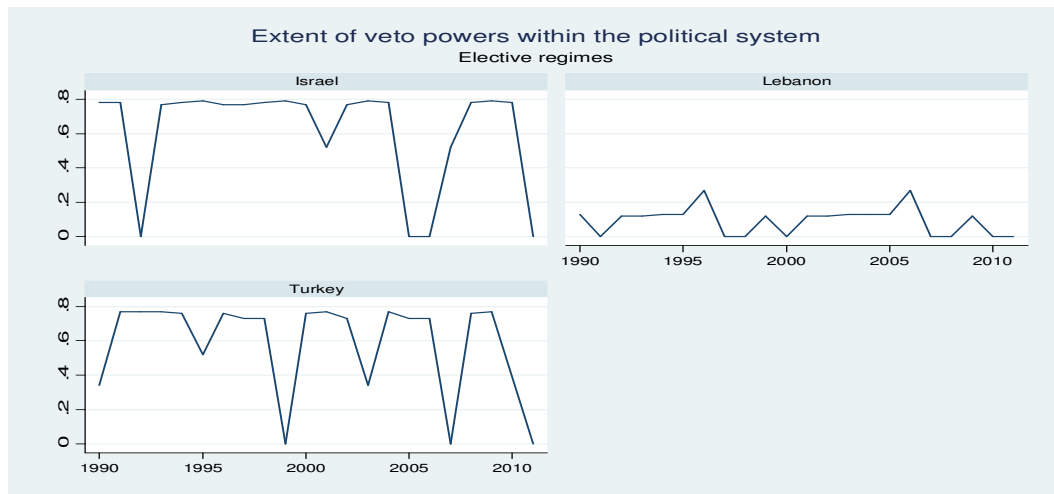
**Graph 3:** Regularity of Low chamber elections

**Source:** Anecdotic evidences



**Graph 4a:** Veto system, non-democratic countries

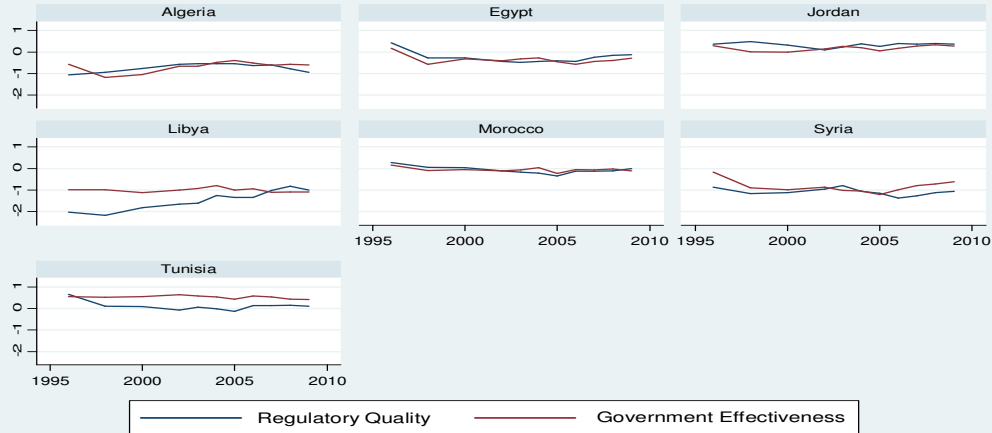
**Source:** Constitutional analysis; POLCON 2010



**Graph 4b:** Veto system, democratic countries  
**Source:** Constitutional analysis; POLCON 2010

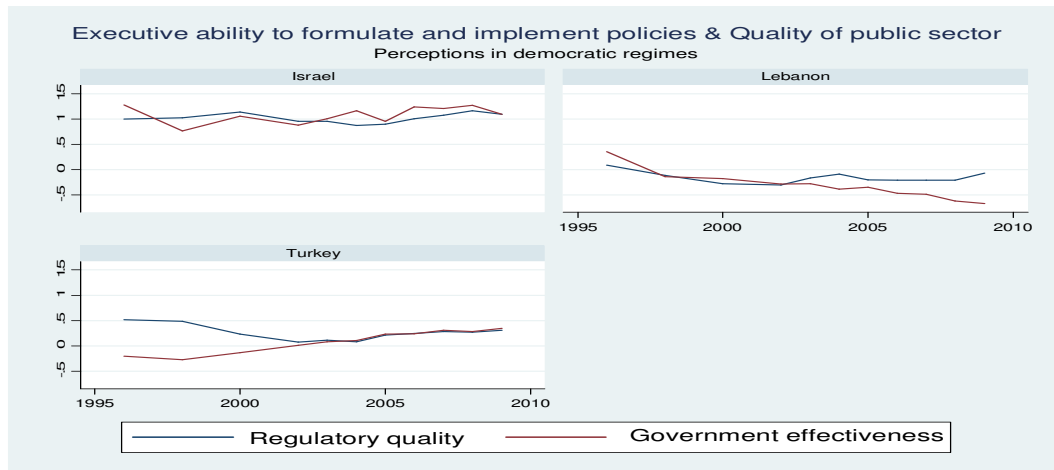


### Executives ability to formulate and implement policies & Quality of public sector Perceptions in authoritarian and non-elective regimes



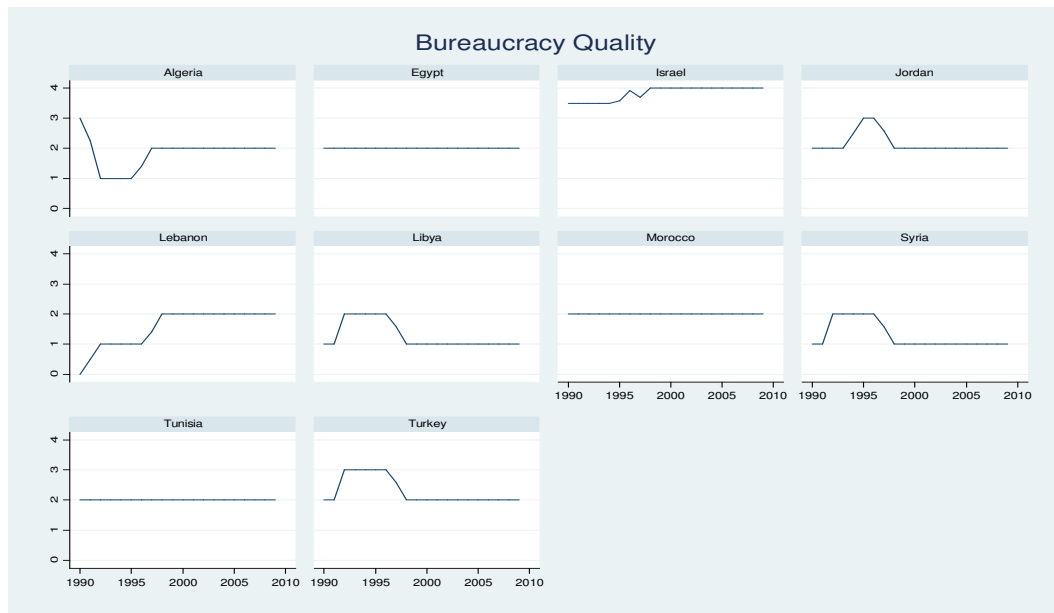
**Graph 5a:** Regulatory Quality and Government Effectiveness, authoritarian regimes

**Source:** Worldwide Governance Indicators- WGI, The World Bank.



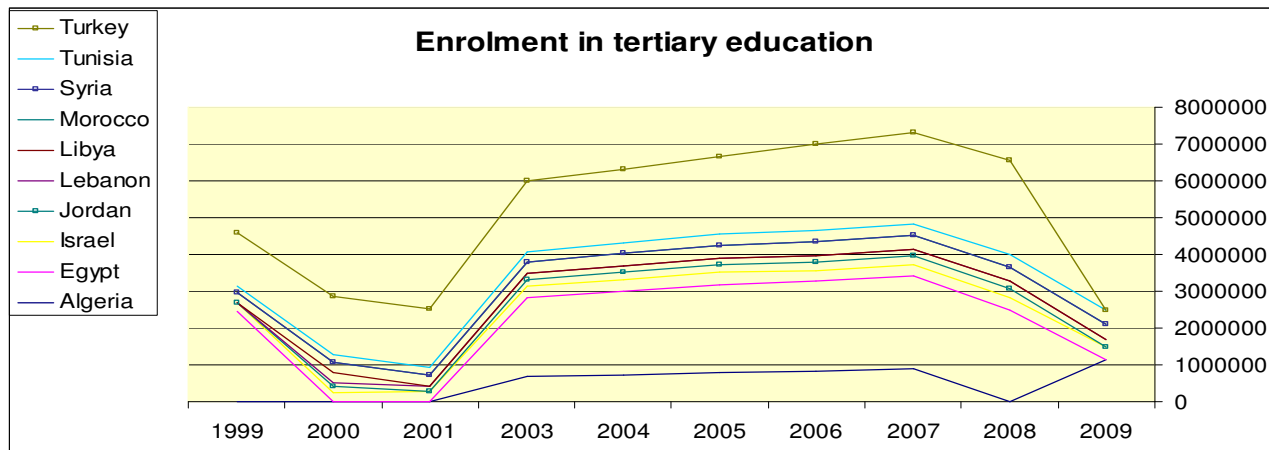
**Graph 5b:** Regulatory Quality and Government Effectiveness, democratic regimes

**Source:** Worldwide Governance Indicators- WGI, The World Bank



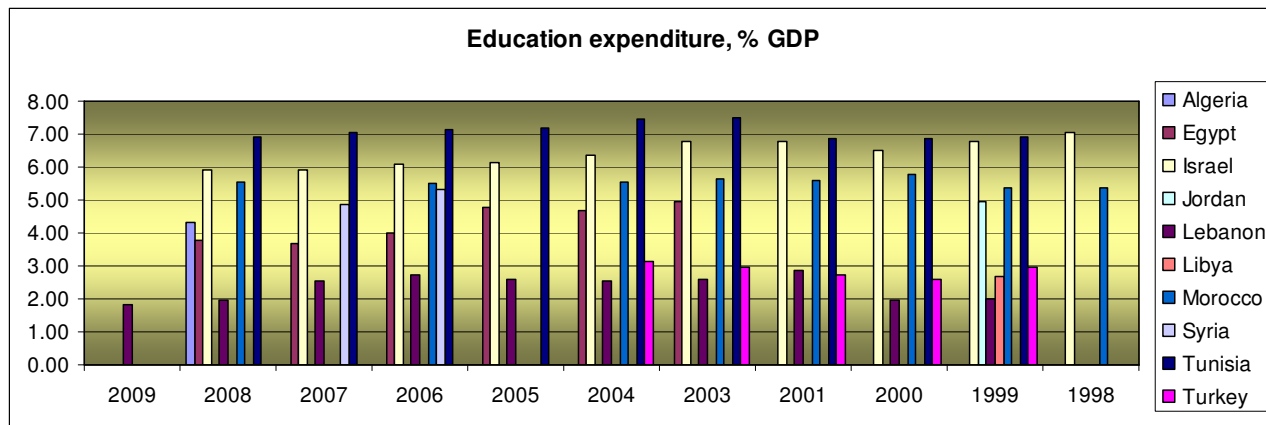
**Graph 5c: Bureaucracy Quality**

**Source:** International Country Risk Guide - ICRG



**Graph 5d:** tertiary education enrolment level

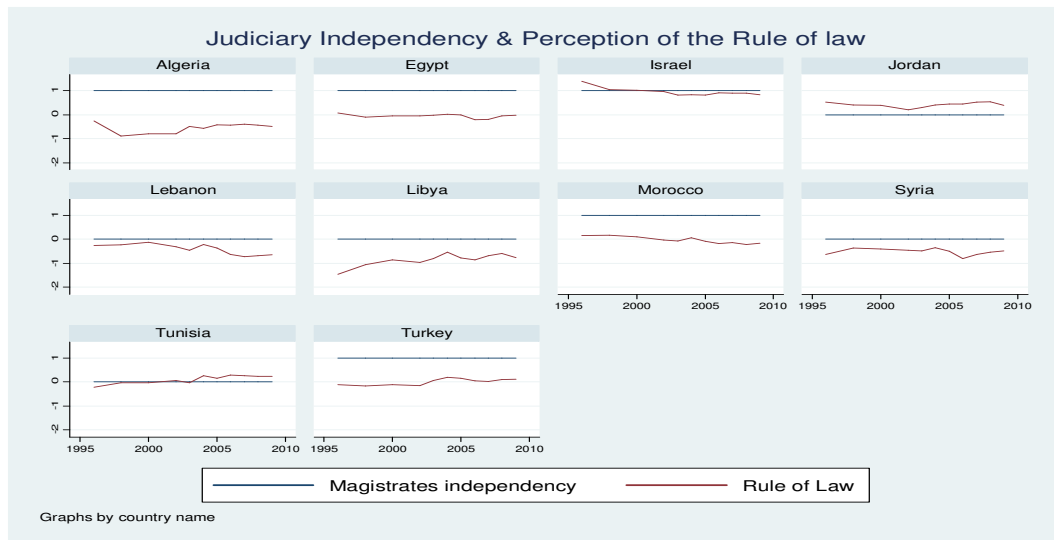
**Source:** The World Bank



**NOTE:** Data for year 2009 are available only for Algeria, Israel, Lebanon, Morocco, and Tunisia

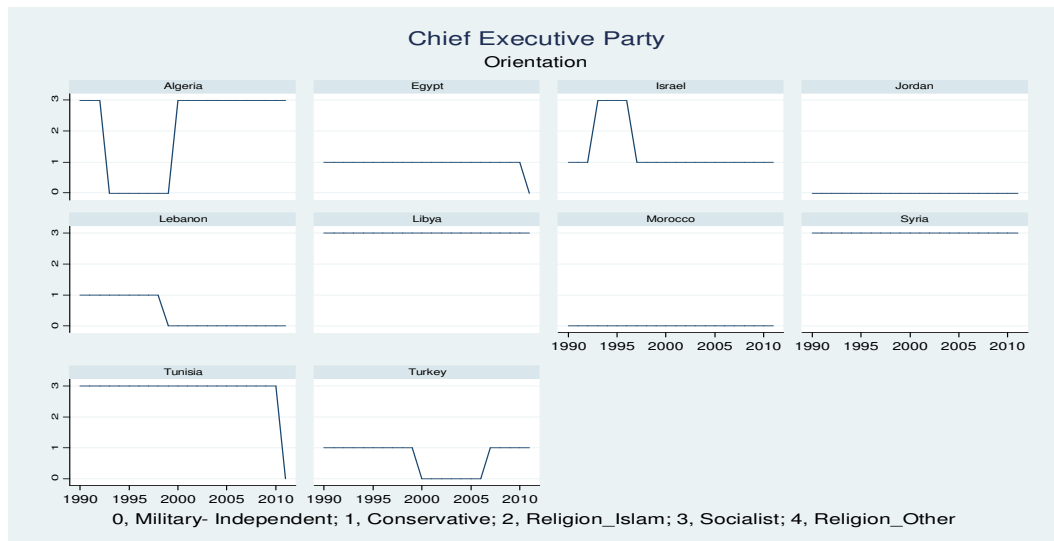
**Graph 5e:** Public expenditure on education as percentage (%) of GDP

**Source:** The World Bank



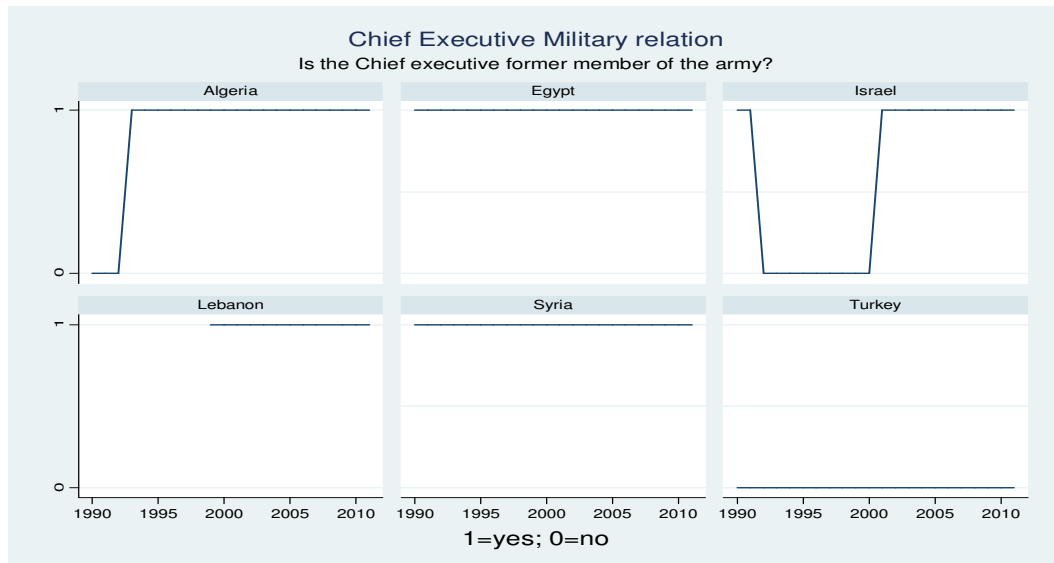
**Graph 6:** Magistrates independency

**Source:** Constitutional analysis; Worldwide Governance Indicators- WGI, The World Bank



**Graph 7:** Chief executive party ideology

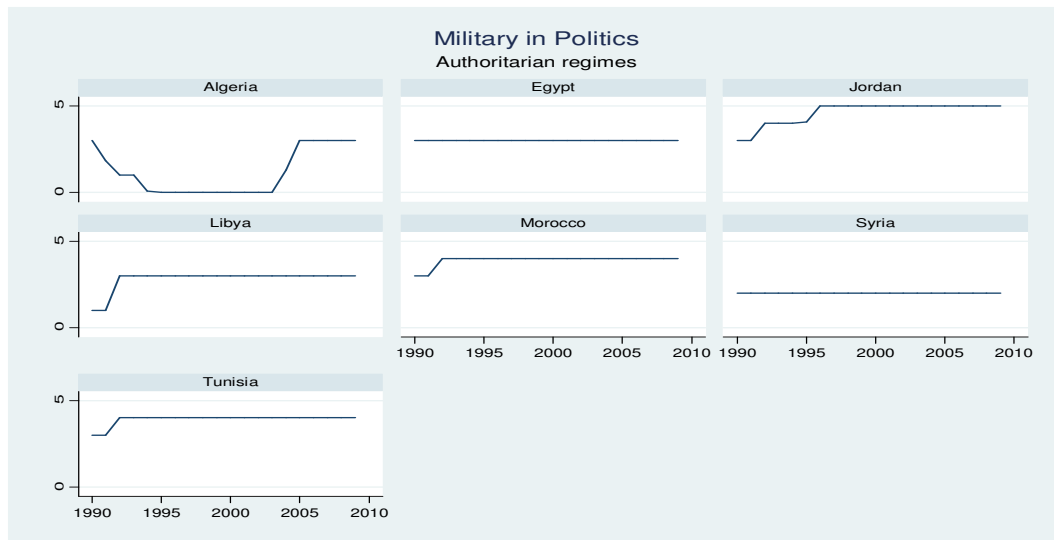
**Source:** Anecdotic evidences



**Graph 8:** Chief executive relation with the Army

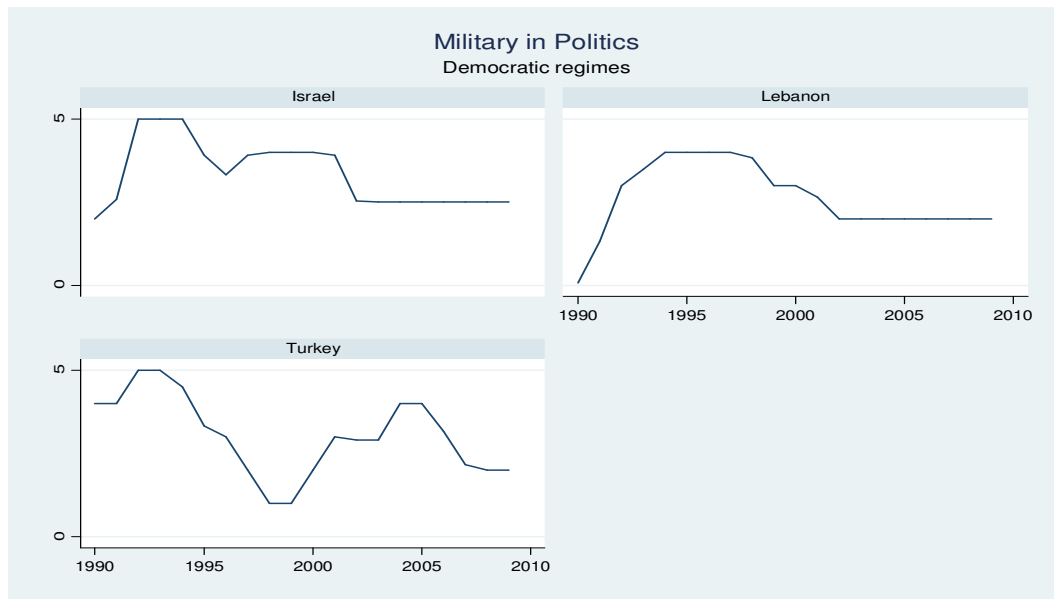
**Source:** Anecdotic evidences





**Graph 9a:** Threat of military takeover, or military takeover, non democratic regimes

**Source:** International Country Risk Guide - ICRG



**Graph 9b:** Threat of military takeover, or military takeover, non democratic regimes

**Source:** International Country Risk Guide - ICRG



## Tables

**Table 1** Electricity sector organization and regulatory restraints mechanisms, Algeria

Country-Period	Ownership	Regulatory History: Plans and Laws adopted	Regulatory History - IRAs established	Private performance	Substantive restraints	Restraints on system changes	Enforcement of restraints
Algeria † 1990-2000	Private monopoly, SONELGAZ. It became SpA in 2002, the State is the principal actions' owner. Formal recognition of independence	Law 99-09 28 July 1999 on energy management, implemented by " <i>décret exécutif n° 04-149 du 19 Mai 2004</i> ".			Tariffs fixed by the Prime Minister in agreement with the Ministry of Energy and Mines	Licenses defined by regulatory authority. No information on changes and amendments procedures.  Legislative very weak; no alternation of parties in power	Very weak judicial power and rule of law ranks being less than 0 (WB - WGI index)
Algeria 2000 - 2010	In the period 2002-2007 the company has been restructured: 26 branches have been created The Monopoly has been substituted by <b>FUNCTIONAL separation between generation, transport and distribution.</b> The regulatory framework include <b>opening production and investments</b> to private actors. First share of IPPs has been allowed; (25%) by independent producer Shariket Kahraba Hadjeret En Nouss (SKH) (CREG	Law n. 03 2000, <b>Conseil de la Concurrence</b> set-up: consultative role. The legislation on competition, as well as the law on renewables and energy efficiency is not yet defined.  <b>Law n. 01 2002</b> Launch of electricity sector reform: electricity and gas distribution through canalization; <b>TPA regime introduced; License procedure</b> for generation and a concession procedure for distribution allowing new operators adopted. <b>2005 set up of regulatory bodies</b> for electricity and gas - <b>CREG</b> - and hydrocarbons ARH.	In 2005 CREG became operative. Comité de Direction, 4 members. They do not have a fixed mandate term. CREG is financed by contribution on tariffs. The budget is approved by the Ministry of Energy and Mines	In 2002, <b>Introduction of a competitive market Network Regulation under "cost of service"</b> Universality of public service guaranteed by the State.			

	Report 2010). Transmission and distribution sectors stay regulated monopolies						
Algeria 2000 - 2010		2006-2010, Plan National de Maîtrise de l'Énergie ( <b>PNME</b> ) for energy efficiency and renewables adopted.  February 2011 Plan for Energy Efficiency for 2011-2013 adopted		In <b>2007</b> definition of bilateral contracts involving a new, <b>non-discriminatory,</b> <b>TPA discipline.</b>			

† The table has been realized analysing the Algerian Constitution and anecdotic evidence concerning the political situation of the country. The Country Report from the Euro-Mediterranean Ministerial Conference, Limassol 2007, have been considered for detailed analysis of the electricity sector regulation. The information have been compared with recent reports on MENA institutional framework (*Paving the way for the Mediterranean Solar Plan* 2012).

**Table 2** Electricity sector organization and regulatory restraints mechanisms, Egypt

Country-Period	Ownership	Regulatory History, Plans - Laws adopted	Regulatory History - IRAs established	Private performance	Substantive restraints	Restraints on system changes	Enforcement of restraints
Egypt † 1990s	Power Law No. 18, 1998, integrated the regional distribution companies with the Egyptian Electricity Authority's (EEA) generating capacity.				The regulator has limited power on Tariffs, which are defined by the Government.	Licenses defined by regulatory authority. No information on revision and procedures' changes  Although separation of powers, the legislative is very weak	Weak judiciary power and Rule of Law perception ranking around zero (WB - WGI index)
Egypt 2000s	Egyptian Electricity Holding Company (EEHC), former EEA, <b>has not full financial autonomy</b> . Generation, distribution and transmission companies created through unbundling are all state-owned. <b>FUNCTIONAL Unbundling</b>	In 2000 the Law N. 164: EEA established in 1970s became a joint stock holding company, the <b>EEHC</b> . In 2005 Competition authority established  <b>In 2010 New electricity law has been prepared by the Regulatory agency:</b> competitive electricity market based on bilateral contracts; TPA regime; TSO establishment; tariffs ratified by the regulator.	In 2000 <b>EGYPTERA</b> set-up. Board of 10 directors chosen among suppliers (EEHC), customers, and <i>experienced persons</i> . Headed by the Minister of Electricity. Self financed. 50 staff working in 4 committees: subsidies, tariffs, market rules, market design.	<b>Market structure is not yet defined.</b> TSO responsible for fulfilling contracts for a unified transmission access charge proposed by the TSO and approved by "the Agency".			

† The table has been realized analysing the Egyptian Constitution and anecdotic evidence concerning the political situation of the country. The Country Report from the Euro-Mediterranean Ministerial Conference, Limassol 2007, have been considered for detailed analysis of the electricity sector regulation. The information have been compared with recent reports on MENA institutional framework (*Paving the way for the Mediterranean Solar Plan* 2012).



**Table 3** Electricity sector organization and regulatory restraints mechanisms, Jordan

Country - Period	Ownership	Regulatory History, Plans - Laws adopted	Regulatory History - IRAs established	Private performance	Substantive restraints	Restraints on system changes	Enforcement of restraints
Jordan † 1990s	<p>1994 Jordan Electricity Authority (JEA) established as a Public share holding company 1996 JEA renamed National Electric Power Company (NEPCO) 1999 Separation of NEPCO into joint stock companies</p> <p>The restructuring of the sector was initiated in 1994 and led to <b>full ownership unbundling in 1999</b></p>	General Electricity Laws in 1996, 1999, and 2002			<p>At the moment there are no information on tariffs mechanisms and the effective role of ERC.</p> <p>The ERC is competent for license issues and dispute settlement. No information on the role of judiciary in managing companies – government disputes are available</p>	<p>In addition to the ERC and the Minister of Energy and Mineral Resources, the <b>Royal Committee on Reviewing Energy Strategy</b> also define energy strategy as the one adopted in 2007.</p> <p>Although separation of powers, the legislative is weak and not able of counterbalancing the power of the Executive and the Monarch. Parliament's election have not been regular in the period 1990 - 2010</p>	<p>Judiciary Independence from political power is not clearly affirmed in Constitution. Nonetheless, the Rule of Law is perceived better than in other countries of the region, on average on 0.5 (WB - WGI index)</p>
Jordan 2000s		<p>The ERC determines connection charges to the network implementing a <b>regulated TPA regime</b>. On-going definition of Market Operator and System Operator</p>	<p>ERC established in 2001 5 Commissioners headed by a Chair and assisted by a Vice-Chairman; Self financed. 50 staff. ERC is in charge of: <b>License</b> generation, transmission, distribution, system operation and bulk supply. Electricity <b>tariffs</b> and connection</p>				

			<p>charges. Promote <b>competition</b> and secure proper functioning of market, make recommendations (to the Ministry).</p> <p>Customer protection: dispute resolution, claims from regular customers; guarantee public service, quality of service.</p> <p>Energy sector regulation and laws are defined by the Minister of Energy and Mineral Resources.</p>				
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† The table has been realized analysing the Jordan Constitution and anecdotic evidence concerning the political situation of the country. The Country Report from the Euro-Mediterranean Ministerial Conference, Limassol 2007, have been considered for detailed analysis of the electricity sector regulation. The information have been compared with recent reports on MENA institutional framework (*Paving the way for the Mediterranean Solar Plan* 2012).

**Table 4** Electricity sector organization and regulatory restraints mechanisms, Turkey

Country - Period	Ownership	Regulatory History, Plans - Laws adopted	Regulatory History - IRAs established	Private performance	Substantive restraints	Restraints on system changes	Enforcement of restraints
Turkey† 1990s	1993: TEK (1984) divided into TEAS and TEDAS	1985 Law on Organization and Duties of the Ministry of Energy and Natural Resources 1994, Law on Protection of Competition; 2001 <b>Electricity Market Law, establishment of regulatory agency EMRA</b> 2001, Natural Gas Market Law 2003, Petroleum Market Law 2005, Liquefied Petroleum Market Law	EMRA 310 staff and 9 board members <b>EMRA is clearly separated from government and energy sector influences.</b>  A regulated TPA regime in place	Bilateral contracts, market completed with a residual pool.	EMRA high degree of autonomy: <b>secondary legislation definition; licenses issue; reviewing and approving electricity tariffs</b> and transport tariffs; define performance standards; <b>settle disputes,</b> auditing market activities; <b>supervise TPA regime.</b>  .	The Ministry of Energy and Natural Resources defines the Energy Policy, and prepare <b>primary legislation</b> for sector regulation	A recent democracy characterized by instability and frequent elections till the beginning of 2000s. It is a parliamentary regime where the executive power is the main decisional body.  Judiciary independence is formally established in the Constitution. Very frequent contrast with the political power. Rule of Law perception in line with the average of MENA area (WB - WGI index).
Turkey 2000s	TEAS unbundled in three companies: EÜAS, (generation), TEIAS (transmission and market operator), and TETAS (wholesale). TETAS is state-owned TEDAS regional distribution have been rearranged: distribution network divided into 21	2006: Five-Year Development Plan for 2007-2013 on ensuring reliable energy supplies; reinforce energy security; favor investments	National Energy Conservation Centre (NECC) in charge of energy efficiency and renewables Legislative basis: Law on Utilization of Renewable Energy Resources for Electricity Generation (2005) Energy Efficiency Law (2007) Law on Geothermal		Cross subsidies between customer groups till 2010		

	regions. 20 companies are corporatized. Privatization of distribution and generation assets to be launched in 2008 (no confirmation). <b>Unbundling is completed</b>		Resources and Natural Mineral Waters (2007)				
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† The table has been realized analysing the Turkish Constitution and anecdotic evidence concerning the political situation of the country. The Country Report from the Euro-Mediterranean Ministerial Conference, Limassol 2007, have been considered for detailed analysis of the electricity sector regulation.

**Table 5** Electricity sector organization and regulatory restraints mechanisms, Israel

Country Period	Ownership	Regulatory History, Plans - Laws adopted	Regulatory History - IRAs established	Private performance	Substantive restraints	Restraints on system changes	Enforcement of restraints
Israel† 1990 - 2007	<p>The <b>Israel Electric Company (IEC)</b> is a joint stock company, 99.8% state-owned, and vertically integrated. IEC investments are funded from revenues and loans (not state budget)</p> <p>2003-2006: IEC <b>unbundling (planned, supposed to be achieved in 2012)</b></p> <p>2008 - 2012: expected privatization except TSO (state monopoly will stay).</p> <p>In 2012, electricity generation and distribution activities will be opened to private investment (in existing units or new ones such as IPP and concessions). No more than 30% of generation capacity, and no more than 20% of the distribution system, will be owned by one company.</p>	1996 Electricity law, amended in 2003	<p><b>PUA</b> - The Public Utility Authority (PUA)-Electricity: 30 staff</p> <p><b>It sets electricity tariffs</b> and transport tariffs, <i>licences operators, monitors quality of services, handles complaints.</i></p> <p>PUA regulates IEC service and final electricity tariffs based on costs and fixed rate of return (generation: 7%, transmission: 5.5%, distribution: 6.2%)</p>	<p>Projects of IPPs were relatively small and could not proceed. A first bid (1997) for an IPP (337 MW CCGT) was unsuccessful.</p> <p><b>IEC only generator and distributor present</b></p>	<p>PUA has wide room for manoeuvre and manage tariffs system: <i>PUA annual revision of tariffs includes a decrease of about 1.8% (efficiency factor) for increased efficiency and improved productivity.</i></p> <p><i>Since 2002, the tariff separates revenues for generation, transmission, distribution (high and low voltage)</i></p>	<p>Separation of powers, but instable political scenario. Bureaucracy well trained</p>	<p>Strong judicial power, low level of corruption and high degree of political independence</p>

		2007 Master Plan with 5 main objectives: security of supply, competition, energy efficiency, environment and optimal use of land.	Separation of policy from regulation and operation is <i>largely achieved</i>				
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† The table has been realized analysing the Israel fundamental laws and anecdotic evidence concerning the political situation of the country. The Country Report from the Euro-Mediterranean Ministerial Conference, Limassol 2007, have been considered for detailed analysis of the electricity sector regulation. The information have been compared with recent reports on MENA institutional framework (*Paving the way for the Mediterranean Solar Plan* 2012).

**Table 6** Electricity sector organization and regulatory restraints mechanisms, Lebanon

Country Period	Ownership	Regulatory History, Plans - Laws adopted	Regulatory History - IRAs established	Private performance	Substantive restraints	Restraints on system changes	Enforcement of restraints
Lebanon† 1990 - 2010	Electricité du Liban (EDL), 100% state-owned and vertically integrated company. No open to private actors. Some concessions for energy production were given to four small companies for distribution with about 7% of the national low voltage customers.	The Ministry of Energy and Water (MEW) is the Ministry responsible for the energy sector	The re was a project for an IRA set-up, never applied	Lebanese electric power sector suffers from lack of capacity and very old generation units that experience frequent outages. EDL has huge losses in the last three years	Unclear (undefined) regulatory framework	Although the Government tried to attract IPPs, the absence of an electricity regulator as well as the missing laws and regulations on licensing, do not favour IPPs establishment	The judicial power suffers of ethnic and religious division within the society. At the same time, the political scenario is characterized by high level of instability

† The table has been realized analysing the Constitution of Lebanon and anecdotic evidence concerning the political situation of the country. The Country Report from the study *Paving the way for the Mediterranean Solar Plan* 2012, provided information on the electricity sector organization.

**Table 7** Electricity sector organization and regulatory restraints mechanisms, Morocco

Country	Ownership	Regulatory History, Plans - Laws adopted	Regulatory History - IRAs established	Private performance	Substantive restraints	Restraints on system changes	Enforcement of restraints
Morocco† 1990 - 2010	L'ONE is a vertically integrated company. Sector's unbundling was <b>expected to start after 2007 law approval</b>	<b>Still under definition phase, the law on electricity sector liberalization expected in 2007 has never been approved</b> This law should provide for TPA non-discriminatory access and market based tariffs	The are no IRA and sector's responsibility is shared between the Ministry of energy and other Ministries, such as Finance, Economy, Interior.	ONE, funded in 1963, is the company for energy production and distribution. The general director of the company is appointed by the executive. It assures 44% of distribution	The IRA does not exist. Managing the sector and implementing the energy policy are by the Government. The Prime Minister supervise interministerial committee, such as the one on tariffs ( <i>commission interministérielle des prix</i> ). The <i>committe</i> is formed by Ministry of Energy, Finance and Interior. The committe defines also transmission tariffs		



	<p>With decree approved in 1994, IPPs have been approved</p> <p><i>JLEC-Jorf Lasfar, assures 50% of national production</i></p> <p>Energy produced is entirely bought by ONE, which then distribute it</p>	<p>The 2007 law project included the definition of 2 markets:</p> <ul style="list-style-type: none"> <li>• <i>un marché libre comportant une bourse et la possibilité de négocier des contrats bilatéraux, accessible aux producteurs et clients éligibles, avec des mécanismes d'équilibrage, d'acquisition des services-système et de règlements.</i></li> <li>• <i>et un marché réglementé, géré par un acheteur unique. Les acteurs du marché libre seront des partenaires actifs sur le marché espagnol (bourse et contrats bilatéraux).</i></li> </ul> <p>Europe, Spain mainly, are relevant for Moroccan energy sector:</p> <p><i>Le gouvernement souhaite l'intégration du marché marocain au marché européen, ainsi qu'à ceux de l'Algérie et de la Tunisie. À cet égard, les mécanismes impliquent que les prix intérieurs soient alignés sur les prix du marché</i></p>	
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† The table has been realized analysing the Constitution of Morocco and anecdotic evidence concerning the political situation of the country. The Country Report from the Euro-Mediterranean Ministerial Conference, Limassol 2007, have been considered for detailed analysis of the electricity sector regulation (in italic and French language some elements taken from the Report).

**Table 8** Electricity sector organization and regulatory restraints mechanisms, Tunisia

Country Period	Ownership	Regulatory History, Plans - Laws adopted	Regulatory History - IRAs established	Private performance	Substantive restraints	Restraints on system changes	Enforcement of restraints
Tunisia 1990 - 2010	The "Société Tunisienne d'Electricité et du Gaz" - STEG, is a vertically integrated company which has a full monopoly on generation, transmission and distribution	Le <b>développement à terme d'un marché régional de l'électricité intégré avec l'UE</b> , permettrait de sécuriser l'approvisionnement national dans un cadre de complémentarité des ressources et des réseaux, et d'optimiser les programmes d'équipement.	IRA does not exist. <i>On envisage un régulateur sous tutelle du Premier Ministre</i>	STEG, born in 1962 is a public company having financial and juridical autonomy from the State	The Head of State appoints the Head of administrations involved in sector management and directors of energy companies (public). The Prime Minister has the direct control of certain administrations and agencies	<i>Tariffs definition process is symptomatic of a high centralised competences: tariffs are defined, after consultation with the executive, by MIEP. No role of the energy companies</i>	
					The Ministère de l'Industrie, de l'Énergie et des PME (MIEP), defines the energy policy and energy regulation, and its implementation. It is in charge of defining tariffs, license issues, and control on the STEG. The Ministère des Finances,		

	approve prices, which are regulated	
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† The table has been realized analysing the Constitution of Tunisia and anecdotic evidence concerning the political situation of the country. The Country Report from the Euro-Mediterranean Ministerial Conference, Limassol 2007, have been considered for detailed analysis of the electricity sector regulation (in italic and French language some elements taken from the Report).

**Table 9** Electricity sector organization and regulatory restraints mechanisms, Syria

Country Period	Ownership	Regulatory History, Plans - Laws adopted	Regulatory History - IRAs established	Private performance	Substantive restraints	Restraints on system changes	Enforcement of restraints
Syria† 1990 - 2010	Vertically integrated, state-owned companies. No unbundling	Information Not Available	There are no IRAs, responsibilities are shared between the Ministry of Electricity and the Ministry of Petroleum	State-owned companies: PEEGT - Public Establishment of Electricity Generation and Transmission - and PEDEE - Public Establishment for Distribution and Exploitation of Electrical Energy. Limited autonomy in decision making and budget	The Ministry of Electricity designs, enforces, and monitors of the energy policy It overviews of sub-sector investment programmes It defines the energy sector regulation (preparation/enforcement rules; licensing authorisations) It controls public energy companies	It exists a Supreme Committee for Energy, headed by Head of the State, which supervises inter-ministerial committees such as the one on tariffs	Weak judiciary power. Strong control of the executive power

† The table has been realized analysing the Syrian Constitution and anecdotic evidence concerning the political situation of the country. The Country Report from the Euro-Mediterranean Ministerial Conference, Limassol 2007, have been considered for detailed analysis of the electricity sector regulation. The information have been compared with recent reports on MENA institutional framework (*Paving the way for the Mediterranean Solar Plan* 2012).





# Methodological Annex

## MENA INSTITUTIONAL ENDOWMENT DATASET

### Variables Definition

#### *Remarks*

1. State identifier
2. Restraints on regulators' discretion written in the regulatory system
3. Restraints on changing regulatory systems, formal or substantial
4. Independent Judiciary
5. Countries' Stability
6. Countries' Investment Profile

*Acronyms reported in dataset*

## Variables Definition

*Remarks:*

In case of countries with two elected Chambers:

*House* refers to the Lower House, or Chamber of Deputies, or Assemblies as reported in Constitutional texts.

*Senate* refers to the Upper Chamber or Council as reported in Constitutional texts

In case of countries with only one elected Chamber:

*House* is the name reported.

The *Chief Executive* is the Head of Executive powers in all those case in which Presidential or Monarchy is the State's regime. S/he could be the Monarch, the President of the Republic, or the Prime Minister, as reported in Constitutional texts.

*Cabinet* refers to the Government.

For *variables having a binary value*, we refer to 1 as equivalent to yes, and 0 as equivalent to no.

In case of no information the cells have been left blank.

In case of information not applicable to the case considered, we report 0.

Variables have been grouped into 6 categories each referring to specific institutional asset. These categories include variables defined having regards different sources mentioned in detail in the references list. We refer mainly to the analysis of Constitutional texts and fundamental laws of involved countries, as well as anecdotic evidences.

DPI 2010 and POLCON 2010 has been taken as reference for methodological aspects in variable definition and comparison of data collected and generated by the analysis. In certain cases DPI values have been used for specific indicators in order to integrate our data. All these cases are reported.

At the end of section 3, quantitative measure of veto points within MENA institutional system is given from POLCON 2010, for the years 1990 – 2007. The measure has been reported in order to compare results from the analysis of constitutions and evidences collected with an already written indicator of veto powers. Specifically, the measure allows the description of government's ability to elaborate credible commitments and pursue the related policy with the necessary stability. Thus, it measures factors favouring certainty in defining, implementation and/or changing a policy.

Finally, we included in the analysis measures of countries' governance and stability in order to complete the analysis of those conditions allowing for



effective commitments towards energy regulation and reforms. A wider description of such indicators is reported under sections 2, 5 and 6.

## 1) STATE IDENTIFIER

### 1 - COUNTRY:

**1 COUNTRY NAME** the name of the country is reported

**2 Year:** 1990 – 2011 period considered for panel data construction

**country1** variable generated for panel data analysis, in STATA version

### 2 - CONSTITUTION

**3 W\_CONST:** written Constitution. Yes or no value.

**4 Y\_ADOPT:** year of Constitution adoption. In case of non written Constitutions it refers to the year of the first fundamental law adopted (i.e.: 1958 for Israel)

**5 Y\_CHANGE:** year of Constitutional change or amendment is reported. In case of non written Constitutions it refers to year in which fundamental laws concerning the organization of powers within the State have been possibly changed (i.e.: Israel case).

### 3 - STATE ORGANIZATION: organization of the country in unitary or federal, and presence of decentralised structures.

**6 UNITARY:** has the State a unitary or federal structure? Yes or no value. We consider Federal States as no=0.

**7 LOC\_ORG:** The organization of State has been decentralised in districts, provinces and/or municipalities. Yes or no value. Cells are left blank when Constitutions say nothing.

**8 LOC\_ORG\_ENER:** Eventual decisional powers of decentralised organization on energy and natural resources when mentioned in Constitutional texts are here considered. Yes or no value. Cells are left blank when Constitutions say nothing.

**9 MUNI** (source: DPI 2010)

**Are municipal governments locally elected?**

0 if neither local executive nor local legislature are locally elected.

1 if the executive is appointed, but the legislature elected.

2 if they are both locally elected.

No information are recorded as blank cells.

**10 STATE** (source: DPI 2010)

**“Are there state/province governments locally elected?”**

0 if neither local executive nor local legislature are locally elected.

1 if the executive is appointed, but the legislature elected.

2 if they are both locally elected.

No information are recorded as blank cells.

**11 AUTHOR** (source: DPI 2010)

**"Do the state/provinces have authority over taxing, spending, or legislating?"**

Yes or No value. No information are recorded as blank cells.

#### **4- STATE REGIME**

**REGIME**: the variable refers to the form of political regime as emerge by Constitutional rules.

In this regard, accordingly to the values registered by the variables:

EXEC\_ELE\_MODE, in this section, and

EXEC\_VETO, PM\_APPO, and PM\_DISM, LEG\_DISM, and LEG\_DISM\_JUST (category 3),

We distinguish in between:

1 "Presidential"; 3"Semi-Presidential" 2"Parliamentary" 0"Monarchy-quasiMonarchical" Regimes. The last case refer to all cases in which the Chief Executive is not an elective body (we include here also Libya).

In STATA version of the database, the variable has been so defined:

1== (EXEC\_ELE\_MODE==1 & EXEC\_VETO==1), (LEG\_DISM==1 & LEG\_DISM\_justify==0)

3== (LEG\_DISM==1 & LEG\_DISM\_justify==1), (EXEC\_ELCMODE==2 & EXEC\_VETO==1), ( EXEC\_ELCMODE==2 & PM\_APPO==1)

2== (EXEC\_ELCMODE==2 & EXEC\_VETO==0) plus (PM\_APPO==2 & PM\_DISM==2)

0== ( EXEC\_ELCMODE==0 & EXEC\_VETO==1).

**12 EXEC\_ELE\_MODE**: refers to the Chief Executive Electoral Mode.

Following the DPI2010 methodology we give

Popular=1;

Parliament =2;

Non elected Chief Executives (i.e.: Monarchy)=0

Systems with *ad hoc* electoral councils, when there is no Prime Minister=0.

#### **5 - RELIGION**

**13 RELIGION**: Presence of a State Religion.

Islam=1;

Other=2;

In case of no reference to religion in the Constitutional text=0.

**14 REL\_lawSource:** Religion as legislative source. Yes or no value.

Yes Islam=1

Yes Other=2

No or say nothing = 0

We consider 1 also those cases in which Islam rule inheritance related issues only (i.e.: Jordan)

## **2) RESTRAINTS ON REGULATORS' DISCRETION WRITTEN IN THE REGULATORY SYSTEM**

### **1 - Administrative Capabilities Of Countries**

**1.1 Regulatory Quality (RQ) - Source: World Bank, Worldwide Governance Indicator<sup>12</sup>**

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<sup>12</sup> Perception-based data sources (surveys of firms and households, as well as the subjective assessments of a variety of commercial business information providers, non governmental organizations, and a number of multilateral organizations and other public sector bodies).

All the individual variables have been rescaled to run from zero to one, with higher values indicating better outcomes. Scores: the aggregate WGI measures are reported in two ways: in the standard normal units of the governance indicator, ranging from around -2.5 to +2.5, and in percentile rank terms ranging from 0 (lowest) to 100 (highest) among all countries worldwide. We have taken the first way.

Definition: *“it captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development”* (Kaufmann, Kraay, Mastruzzi, 2010: 4).

Standard errors are also reported

Available data: 1996, 1998, 2000, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009

## **1.2 Government Effectiveness (GE) - Source: World Bank, Worldwide Governance Indicators**

Definition: *“it captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government’s commitment to such policies”* (Kaufmann, Kraay, Mastruzzi, 2010: 4).

Standard errors are also reported

Available data: 1996, 1998, 2000, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009

## **1.3 Bureaucracy Quality (BQ) – Source: International Country Risk Guide database**

It qualifies the strength of bureaucracy. The *institutional strength and quality of the bureaucracy* is one of the *“shock absorber that tends to minimize revisions of policy when governments change”*.

Definition: *“high points are given to countries where the bureaucracy has the strength and expertise to govern without drastic changes in policy or interruptions in government services. In these low risk countries, the bureaucracy tends to be somewhat autonomous from political pressure and to have an established mechanism for recruitment and training.*

*Countries that lack the cushioning effect of a strong bureaucracy receive low points because a change in government tends to be traumatic in terms of policy formulation and day-to-day administrative functions”* .

(ICRG, [http://www.prsgroup.com/ICRG\\_Methodology.aspx#PolRiskRating](http://www.prsgroup.com/ICRG_Methodology.aspx#PolRiskRating) ).

The highest the score, the better the function of bureaucracy is

Highest score: 4 Points

Available data: since 1990 to 2009

## **2 - Informal Norms And Contending Social Interests**

### **2.1 Rule of Law - Source: World Bank, Worldwide Governance Indicators**

Definition: it captures *“perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence”* (Kaufmann, Kraay, Mastruzzi, 2010: 4).

Standard errors are also reported

Available data: 1996, 1998, 2000, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009

## **2.2 Corruption** – Source: International Country Risk Guide database

It assesses the level of *corruption within the political system*, viewed as a threat to foreign investment: *“it distorts the economic and financial environment; it reduces the efficiency of government and business by enabling people to assume positions of power through patronage rather than ability; and, last but not least, introduces an inherent instability into the political process”*.

(ICRG, [http://www.prsgroup.com/ICRG\\_Methodology.aspx#PolRiskRating](http://www.prsgroup.com/ICRG_Methodology.aspx#PolRiskRating)) .

The highest the score, the lowest the level of corruption

Highest score: 6 Points

Available data: since 1990 to 2009

## **3) RESTRAINTS ON CHANGING REGULATORY SYSTEMS, FORMAL OR SUBSTANTIAL**

**1 - EXECUTIVE SYSTEM.** This group of variables allow the analysis of countries' Executive powers, where the word Executive refer to the Chief of Executive powers as emerge from Constitutional text and anecdotic evidences.

**1 Executive\_Name** (source: POLCON 2010).

It reports the name of Chief Executive. Name is repeated for each year

**2 Executive\_Party** (source: POLCON 2010).

It reports the name of Chief Executive's Party

Name is repeated for each year.

**3 Executive\_voteShare (%)** (source: POLCON 2010).

**4 PRT\_YIN** (source DPI 2010): How many years has the Chief Executive Party has been in office? Cells left blank when information are not available or the army is at power

**5 EXEC\_ID:** (based on the methodology of DPI 2010 for EXECRLC variable).

It refers to the Chief Executive Party orientation as resulting from analysis of factual evidences and is divided between:

4= Religion – Other (REO): other religion;

3= Left (L): socialists, communist parties;

2= Religion – Islam (REI): Islamic religion;

1= Conservative - Right (C);

0= Independent, military, or no information available.

**6 EXEC\_MANDATE:** The variable refers to the number of years the mandate of elected Chief Executive last.

Real number. Cell left blank when Constitution says nothing on this, and in case of Monarchies being the King a non-elected Chief Executive. The value is reported for each year, in order to identify eventual changes in terms mandate due to Constitutional changes.

**7 EXEC\_MANDa:** The variable refers to the possibility for the elected Chief Executive to have further mandate after the first one as reported in Constitutional text. Yes or no value.

Cells left blank when Constitution says nothing on this, and in case of non elected Chief Executives (i.e.: Monarchies).

**8 EXEC\_RELECT:** how many times the Chief Executive may be re-elected? We refer to formal limits to the possibility of being re-elected as reported in Constitutional text.

0=EXEC\_MANDATEa is no;

1=Once;

2=Twice.

Cells left blank when Constitution says nothing on this, and in case of non elected Chief Executives (i.e.: Monarchies).

**9 EXEC\_YIN** (source: DPI 2010, variable YRSOFFC)

How many years has the Chief Executive been in office?

*"Years are counted in which the executive was in power as of January 1 or was elected but hadn't taken office as of January 1"* (DPI, 2010: 5).

Considering the year 2011, although in certain cases provisory governments have been established we left the cell blank due to scarce information.

In case of non available information, cells have been left blank.

**10 EXEC\_VETO:** Veto power of the Chief Executive. She/he can veto legislation. Yes or no value. This variable refers to Constitutional texts. Specifically in system with both a Prime Minister and a President we consider EXEC\_VETO to further understand if the system has strong presidential component or not.

1= yes

0=no

Cells left blank when Constitutions say nothing.

**11 EXEC\_LIM:** Limits to professional, commercial, financial or industrial activity of the Executive members when expressed in Constitution are registered with 1. When no information are available, cells are left blank. Yes or no value

**12 Military\_REL:** Is the Chief Executive a former member of the Army?  
Yes or no value

Data have been derived by anecdotic evidences. In case of yes answer, 1 is reported for all years in office of the Chief Executive.

**13 RELG\_PROOF:** The Chief Executive has to profess a specific religion as given by Constitution. Yes or no value.

No=0

Yes Islam=1

Yes Other RELIGION=2

Cells left blank when Constitutions say nothing.

**2 - CABINET** This section refers to information on the Executive power, understood as the Government and the Chief Executive.

**1 PM\_APPO:** Who appoints and dismiss the Prime Minister?

0=Direct elections

1=Chief executive (President, Monarch, Prime Minister)

2=Parliament

**2 PM\_DISM:** Who dismiss the Prime Minister?

0=no provisions

1=Chief executive (President, Monarch, Prime Minister)

2=Parliament

PMAPPO and PMDISM are related to group 4, Regime variable, in those cases when the Chief Executive may appoint Prime Minister *and* Dismiss prime minister and / or other ministers.

**3 CAB\_APPO:** Who appoint the Cabinet?

0=no provisions

1=Chief executive (President, Monarch)

2=Parliament

**4 CAB\_DISM:** Who dismiss the Cabinet?

0=no provisions 1=Chief executive (President, Monarch)

2=Parliament

**5 PM\_ELEC** (source: DPI2010)

Register the year of Prime Minister election, when she/he is not named by other bodies than public vote. The year of election is registered with a 1.

**6 PM\_NAME** (source: POLCON 2010). Prime Minister name.

**7 PM\_PARTY** (source: POLCON 2010). Prime Minister party

**8 EX\_LEG:** Executive Legislative Initiative. Yes or no value

If such initiative is allowed by Constitutions only in specific, listed, circumstances, we give 0.5 value

**9 EXEC\_NAT** (source: DPI2010)

“Nationalist party”: when a primary component of the party’s platform is the creation or defence of a national or ethnic identity as in case of “*parties that have fought for independence, either militarily or politically, from a colonial power*” (DPI 2010: 8). Yes or no value.

In cases where executive is independent, the executive’s personal orientation is recorded.

When there is no executive cells are left blank.

**10 EXEC\_AGE** (source: DPI2010)

“Party - Time since formation under the same name”

0 if executive is not affiliated with a party.

**11 ALLHOUSE** (based on the methodology of: DPI2010)

“Does party of executive control all relevant houses?”

Yes or no value. Cells are left blank when there are no information

### **3 - LEGISLATIVE POWER**

**1 HOU\_TERM**: The House term in number of years. Real number

**2 SEN\_TERM**: The Senate term in number of years. Real number

**3 FRAUD**: Record anecdotic evidences on denounced electoral fraud by both National and International observers. Yes or no value. Cells are left blank when there are no information

**4 HOU\_ELEC**: This variable register the year of house election. Year  
The year of election is registered with a 1.

**5 HOU\_EL\_MODE**: this variable register the mode of House election:

0= non elected legislature;

1= entirely elected by public vote;

2= partially elected by voters, and partially by the Chief executive.

This variable is also considered for the definition of variable REGIME, section 4.

**6 HOU\_EL\_MODEa**:

Majoritarian=1, or Proportional=0.

**7 SEN\_EL\_MODE**: this variable register the mode of Senate election.

1= entirely elected by public vote;

2= partially elected by voters, and partially by Chief executive;

3= named by the Chief executive;



4= general public is excluded and the Senate is elected by people having certain characteristics such as: members of local councils, members of professional chambers.

Cells are left blank when only one chamber exists.

**8 REG\_ELEC:** Regularity of election in the Parliament.

Yes or no value.

It derives analyzing the correspondence between **HOU\_ELEC** and **HOU\_TERM** and refers only to the lower chamber. In correspondence of the **HOU\_ELEC**, year of election, it is reported a 1 in case of respected terms for elections.

Considering the analysis starting from 1990, a value of 1 is assigned to the elections happened in the first 5 years of 1990s.

**HOUELEC\_REG** is the synthetic indicator defined for elections regularity. It considers each years election and its respondent to the expected end of the parliamentary term.

Yes or no value

-1= non-regularity ( **HOU\_ELEC\_Y**==1 & **REG\_ELEC**==0)

1= regularity ( **HOU\_ELEC\_Y**==1 & **REG\_ELEC**==1)

0= no information ( **HOU\_ELEC\_Y**==0 & **REG\_ELEC**==0)

#### **4 - PARTIE AND ELECTIONS**

**1 FREE:** Freedom of expression association meeting formally granted by Constitutions.

Yes or no value.

**2 P\_REL:** Religious foundation of parties. Yes or no value.

**3 P\_IDEOL:** ideology of parties as allowed to by Constitutions

0= political (no religion, linguistic, or regional issue as dominant);

1= religious;

2= ethnic;

3= both religious and political.

##### **4.1 - MAJORITY PARTY**

This part has been built following the DISP 2010 methodology and taking some data opportunely quoted.

**1 TOTSEATS:** Total Seats in the Legislature (DPI2010) Total number.

Total seats in the legislature, or in the case of bicameral legislatures, the total seats in the House.

This variable includes appointed and elected seats.

**2 MJ\_PARTY:** (source: DPI2010) It refers to the largest government party:

**2.1 MJPNAME;**

**2.2 MJPSEAT;**

**2.3 MJPVOTE.**

#### **4.2 - OPPOSITION PARTY**

This part has been built following the DISP 2010 methodology and taking some data opportunely quoted.

**1 NUM\_OPP:** (source: DPI2010).

Number of Opposition Seats. Real number.

Records the total number of seats held by all opposition parties. Appointees are not included on the assumption that they support the government.

**2 OPP\_VOTE:** (source: DPI2010)

Vote Share of Opposition Parties. Records the total vote share of all opposition parties.

**3 NUM\_GOV:** (source: DPI2010)

Number of Government Party Seats. Real Number.

Total number of seats held by all government parties.

**4 NUM\_VOTE:** (source DPI2010)

Vote share of Government Parties. Records the total vote share of all government parties.

### **5 - PARLIAMENT DISMISSAL AND VETO POWER**

**1 LEG\_DISM:** Who dismiss the Parliament?

This variable is related to group 4- Regime, specifically in those cases in which the Chief Executive may dismiss the Parliament and call for new elections.

1= Chief executive

0= Other (i.e.: military)

**2 LEG\_DISM\_JUST:** In cases the Chief Executive may dismiss the Parliament, we report yes or no value when a justified reason is required by Constitutional provision.

0= No justification

1= Justification required

Cells are left blank when there are no provisions on this point.

**3 LEGVeto:** Parliament' s Control Procedures on Executive's action - i.e.: rights of interpellation  
Yes or no value. Cells are left blank when Constitutions say nothing.

## **6 - POLITY CONSTRAINTS**

**X\_CONST** – Source: POLCON 2010 data base and POLITY IV project  
Constraints to the executive power.

Definition: *“This variable refers to the extent of institutionalized constraints on the decision making powers of chief executives, whether individuals or collectivities. Such limitations may be imposed by any “accountability groups””* (Marshall, Gurr and Jagers, POLITY IV, 2010: 24). Such groups may be majority parties in the legislatures, or the opposition parties in a highly fragmented political scenario, ruling parties, and the monarch entourage; military as well as religious groups when strong may be considered as accountable groups. In many cases an independent judiciary constitute one of the groups e are referring to. The relevance of this value is given by the possibility of measuring the level of check and balances in the decision making process. It goes from unlimited authority to executive subordination and very limited room for action for the executive.

Available data: since 1990 to 2007

**POLCON V 2010** – Source: POLCON 2010 data base

The index assigns to countries *without effective veto points* the lowest score. Identifying veto points, firstly the different institutionalised veto power are identified, as we did analysing the role of executive and legislative, as well as judiciary in the 4<sup>th</sup> section. Specifically, *“The preferences of each of these branches and the status quo policy are then assumed to be independently and identically drawn from a uniform, unidimensional policy space. This assumption allows for the derivation of a quantitative measure of institutional constraints using a simple spatial model of political interaction”* (Heinsz, POLCON 2010). The measure obtained is modified in order to consider *the extent of alignment across government branches*; a further modification occurs when capturing *the extent of preference heterogeneity within each legislative branches* (ibidem).

## **4) FORMAL JUDICIARY INDEPENDENCE FROM POLITICAL POWER**

This section summarize data on judiciary independence by political power mainly. It is based on the analysis of Constitutional texts, and the presence of specific provisions regarding:

- formal independence of judiciary, both from political and religious power;
- methods for magistrates appointment and dismissal.

**Mindep** variable gives a measure of independence of judicial from political power, as resulting by the analysis of Constitutions. It is one of the three dimension of institutional endowment considered by Levy and Spiller (2004) together with *restraints on regulators' discretion written in the regulatory system*; and *restraints on changing regulatory systems, formal or substantial* (Levy and Spiller, 2004: 202), here considered too.

Independency== 1 if ( M\_APPO==2 & POL\_INDEP==1), (M\_APPO==3 & POL\_INDEP==1), (M\_DISM==2 & POL\_INDEP==1), (M\_DISM==0 & POL\_INDEP==1)  
 Dependency==0 if (M\_APPO==1 & POL\_INDEP==0), ( M\_DISM==1 & POL\_INDEP==0)

**1 POL\_INDEP:** Formal independence of judiciary power by political power. When Constitutions say nothing, cell are left blank. Yes or no value.

**2 REL\_INDEP:** Formal independence of judiciary power by religion. When Constitutions say nothing, cell are left blank. Yes or no value.

**3 M\_APPO:** Magistrates appointment, and careers decision.

1= Chief Executive, sometimes she/he is Head of Magistracy;

2= Judiciary Body, when the Head is different from the Chief Executive;

3= Other such as the Ministry or those Constitutions referring to law, even when rest vague on this point1.

When Constitutions say nothing, cells are left blank.

**4 M\_DISM:** Magistrate dismissal decision.

Magistrate dismissal by political power = 1

Magistrate dismissal by magistrate body=2

Magistrates dismissal not possible =0

When Constitutions say nothing, cells are left blank.

## 5) COUNTRIES' STABILITY

Description of stability of a country is derived by four ICRG indicators referring to Internal conflicts, External conflicts, Military in politics, Religion in politics. These four dimensions give a wider framework for comprehension of countries' political stability.

Available data: since 1990 to 2009

**1 Internal Conflict** – this indicator assesses the level of political violence in the country and its potential impact on governance.

Definition: *“The highest rating is given to those countries where there is no armed or civil opposition to the government and the government does not indulge in arbitrary violence, direct or indirect, against its own people. The lowest rating is given to a country embroiled in an on-going civil war. The risk rating assigned is the sum of three subcomponents, each with a maximum score of four points and a minimum score of 0 points”*

(ICRG, [http://www.prsgroup.com/ICRG\\_Methodology.aspx#PolRiskRating](http://www.prsgroup.com/ICRG_Methodology.aspx#PolRiskRating)) .

The subcomponents are:

- Civil War/Coup Threat
- Terrorism/Political Violence
- Civil Disorder

A score of 4 points equates to Very Low Risk

A score of 0 points to Very High Risk.

Total score: 12 Points

**2 External Conflict** – It assesses the risk to the incumbent government deriving from foreign actions, ranging, both *non-violent external pressure* (diplomatic pressures, withholding of aid, trade restrictions, territorial disputes, sanctions, etc) and *violent external pressure* (cross-border conflicts to all-out war).

Definition: *the risk rating assigned is the sum of three subcomponents, each with a maximum score of four points and a minimum score of 0 points.*

(ICRG, [http://www.prsgroup.com/ICRG\\_Methodology.aspx#PolRiskRating](http://www.prsgroup.com/ICRG_Methodology.aspx#PolRiskRating)) .

The subcomponents are:

- War
- Cross-Border Conflict
- Foreign Pressures

A score of 4 points equates to Very Low Risk

A score of 0 points to Very High Risk.

Total score: 12 Points

**3 Military in Politics** – considered *military involvement in politics, as diminution of democratic accountability*. Thus, a military takeover or threat of a takeover may also represent a high risk if it is an indication that the government is unable to function effectively and that the country therefore has an *uneasy environment for foreign businesses*.

Definition: *The lowest the rank, the greatest the degree of military participation in politics.*

(ICRG, [http://www.prsgroup.com/ICRG\\_Methodology.aspx#PolRiskRating](http://www.prsgroup.com/ICRG_Methodology.aspx#PolRiskRating)) .

Highest score: 6 Points

**4 Religion in Politics** – It refers to cases in which Religious tensions may derive from the domination of a single religious group *that seeks to replace civil law by religious law* and apply exclusivist policy on the base of religious affiliation.

*“The risk involved in these situations range from inexperienced people imposing inappropriate policies through civil dissent to civil war”.*

Definition: *The lowest the rank, the greatest the degree of religion in politics and eventual tensions.*

(ICRG, [http://www.prsgroup.com/ICRG\\_Methodology.aspx#PolRiskRating](http://www.prsgroup.com/ICRG_Methodology.aspx#PolRiskRating)) .

Highest score: 6 Points

## **6) COUNTRIES' INVESTMENT PROFILE**

Definition: This is an *“assessment of factors affecting the risk to investment that are not covered by other political, economic and financial risk components. The risk rating assigned is the sum of three subcomponents, each with a maximum score of four points and a minimum score of 0 points”.*

The subcomponents are:

- Contract Viability/Expropriation;
- Profits Repatriation;
- Payment Delays

A score of 4 points equates to Very Low Risk

A score of 0 points to Very High Risk.

Total score: 12 Points

Available data: since 1990 to 2009

Acronyms: Parties and movement as reported in dataset

Algeria:

RND: National Rally For Democracy

FLN: National Liberation Front

Egypt:

ASP: Socialist Party

NPD: National Democratic Party

Lebanon:

RD: Resistance and Development

Libya

ASU: Arab Socialist Union

Morocco:

Socialist: Socialist Union of Popular Forces

UC: Constitutional union

Usfp: SOCIALIST

ISTQLAL: Independency party

AKP: Justice and Development Party

Syria:

NPF: National Progressive Front

Turkey

AKP: Justice and Development Party

DSP: Democratic left (socialist) party

DYP: Truth party

## References

African Economic Outlook, 2011, Algeria, [www.africaneconomicoutlook.org](http://www.africaneconomicoutlook.org)

Economist Intelligent Unit, 2011, *Spring tide, ill the Arab risings yield democracy, dictatorship or disorder?*, The Economist [www.eiu.com](http://www.eiu.com).

Emerson M., Youngs R. (eds.), 2009, *Democracy's plight in the European neighbourhood struggling transitions and proliferating dynasties*. CEPS Brussels, Fride Madrid.

European Commission, 2007, Fifth Euro-Mediterranean Ministerial Conference on Energy, Final Report, Limassol.

Ferreira Filho J.A., 2007, "Economic Growth and Changes in Policies: The Role of Veto Players in Latin American and East Asian Countries", ILAS Columbia University Working Paper.

Freedom House, 2011, Countries at the cross-roads: Algeria, Egypt, Libya, Morocco, Syria, Tunisia, Turkey

Freedom House, 2010, Countries at the cross-roads: Jordan, Lebanon

Gilardi F., 2005a, "The Institutional Foundations of Regulatory Capitalism: The Diffusion of Independent Regulatory Agencies in Western Europe", *ANNALS, AAPSS*, 598, pp.84-101.

Gilardi F., 2005 b, "The Formal Independence of Regulators: A Comparison of 17 Countries and 7 Sectors", *Swiss Political Science Review*, 11 (4), pp.139-167.

Glachant J.M., 2008, "La deregulation des industries de reseaux comme politique institutionnelle de creation de marches et de mecanismes de gouvernance", *Annals of Public and Cooperative Economics*, 79 (3/4), pp. 487-525

Hanretty, C., Koop, C., 2009. Measuring Regulators' Statutory Independence. APSA 2009 Toronto Meeting Paper. Available at SSRN: <http://ssrn.com/abstract=1449103>.

Henisz Witold J., Zelner Bennet A., 2010, Measures of Political Risk, <http://www-management.wharton.upenn.edu/henisz/>



International Country Risk Guide, Part II A Business Guide to Political Risk for International Decisions, [http://www.prsgroup.com/ICRG\\_Methodology.aspx](http://www.prsgroup.com/ICRG_Methodology.aspx)

International Constitutional Law Project Information  
<http://www.servat.unibe.ch/icl/info.html>

Joskow P. L., 2005, "Incentive regulation in theory and practice: electricity distribution and transmission network", CEEPR, pp.1-95

Kaufmann D., Kraay A., Mastruzzi M., 2010, *The Worldwide Governance Indicators Methodology and Analytical Issues*, The World Bank.

Keefer P., 2010, *Database of Political Institutions - DPI*, World Bank

King S.J., 2009, *The new authoritarianism in the Middle East and North Africa*.  
Bloomington: Indiana University Press

König T., Debus M., 2010, "Veto Players, Reform Processes and Policy Change: Concluding Remarks", *Reform Processes and Policy Change, Studies in Public Choice*, 16, pp.269-283

Levy B., Spiller T., 1994, "The institutional foundations of regulatory commitment: a comparative analysis of telecommunications regulation", *Journal of Law, Economics & Organization*, 10(2), pp. 201-246

Levy B., Spiller T., 1996, *Regulations, institutions, and commitment: comparative studies of telecommunication*, Cambridge: Cambridge University Press

Majone, G., 1997, "From the positive to the regulatory state: causes and consequences of changes in the mode of governance", *Journal of Public Policy*, 17(2), pp.139-167.

Majone G., 1994, "The rise of the regulatory state in Europe", *West European Politics*, 17 (3), pp. 77-101

Marx D. A., 2010, "North Africa's constitutions at the 50-year mark: an analysis of their evolution", *The Journal of North African Studies*, 15 (4), pp.481-495.

Observatoire Méditerranéen de l'Energie, 2011, *Mediterranean Energy Perspectives Egypt*, OME (eds), Nanterre France

Ottaway M., 2008, "Evaluating Middle East reforms: significant or cosmetic", Marina Ottaway, Julia Choucair-Vizoso (eds), in *Beyond the façade: political reform in the Arab world*, Carnegie Endowment for International Peace, 2008, pp.1 – 15.

Paving the Way for the Mediterranean Solar Plan, 2012, Country Reports  
<http://www.pavingtheway-msp.eu/index.php?id=917>

Rustow D., 1967, *A World of Nations: Problems of Modernization*, Washington, DC, The Brookings Institution.

Roberts T., 2011, "Political Institutions and Foreign Direct Investment in developing Countries: Do Veto Players Mean More to Investors than Democracy or Property Rights?", Paper presented at the annual meeting of the American Political Science Association, Marriott, Loews Philadelphia, and the Pennsylvania Convention Center, Philadelphia, PA.

Transparency International, 2011, Corruption perception index,  
<http://www.transparency.org/>

Transparency International, 2009, Global Corruption Report

Transparency International, 2009, Country reports on judicial corruption: Algeria, Egypt, Israel, Morocco

Transparency International, 2009, National Integrity System Study, Egypt

Transparency International, 2009, National Integrity System Study, Lebanon

Transparency International, 2009, National Integrity System Study, Morocco

Tsebelis G., 2002, *Veto players. How political institutions work*, Russel SAGE Foundation

Zahid M., 2010, *The Muslim Brotherhood and Egypt's Succession Crisis, The Politics of Liberalisation and Reform in the Middle East*. New York: Tauris Academic Studies

## Chapter 4

# **Independent Regulatory Agencies and Rules Harmonization for the Electricity Sector and Renewables in the Mediterranean Region<sup>13</sup>**

### **1. Introduction**

The paper investigates the extent of independence and decision making autonomy of energy regulatory agencies in the Mediterranean region. Being one of the features characterizing the process of liberalization (OECD, 2002) , agencies' independence from political power and stakeholders is widely recognised as a guarantee of regulatory commitments of a country (Majone 1996). With regards to the energy sector, the establishment of Independent Regulatory Agencies (IRAs) may favour investments in networks infrastructure and, considering the increasing relevance of renewable energy sources, facilitates system adaptation to the integration of intermittent renewable sources such as solar and wind.

Regulatory agencies have been recently set-up in relevant energy producers and transit countries of the Mediterranean region, Middle East and Northern Africa (MENA) countries mainly. The Mediterranean region, currently at the centre of renovating interests on electricity and renewables, is highly involved in EU frameworks of cooperation, with energy rules convergence as one of the main objectives to achieve. In the aftermath of current initiatives and investment projects, such as the Mediterranean Solar Plan and the Desertec, a harmonized and transparent regulatory framework at wider Mediterranean level is required. Thus, the progressive establishment of IRAs in the southern Mediterranean region is here analysed jointly with the degree of adoption of those regulatory standards qualifying the globalization of regulation (Levi-Faur 2005).

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Our study, which includes original data from IRAs in the Mediterranean region, mainly refers to findings from a survey launched on January 2012 among Mediterranean regulators and energy companies. Data have been collected from Egypt, Jordan, Morocco, Tunisia, Turkey, and Croatia. All respondents belong to regulatory agencies with the exception of Morocco and Tunisia, where IRAs have not been set-up and answers have been provided respectively by the energy company, ONE, and the Ministry of Industry. The analysis is completed with information drawn from official documents on Algeria, Israel and Lebanon. Libya and Syria have not been considered due to the unclear political situation, and civil war, at the moment in which the analysis started.

Our study fills the gap in the literature on independence of regulators in developing countries, organizing new and existent data with the aim of clarify the extent of southern Mediterranean independence of energy regulatory bodies. With this regard, data organization follows three dimensions of agencies' independence: decision making autonomy, organizational autonomy, and agencies' accountability.

Survey's results show that regulatory agencies in the region are mainly advisory bodies of executives, the latter being the sole having decision making powers on issues such as tariff setting and Third Party Access. Moreover, network unbundling in the region remains essentially functional, and state-owned companies own and manage networks in the majority of cases here considered. To sum-up, in MENA countries IRAs have been established before liberalizing the electricity sector and political interference in regulatory decisions still affects the existing regulatory framework.

The paper is structured into five sections: Section 2 critically reviews the rationale behind IRAs' establishment. It analyses the model of IRAs as affirmed in European Union (EU), being regulatory convergence in the Mediterranean region mainly promoted by EU. Section 3 provides detailed description of our research method (section 3). Methods for data collection and assessment of the index of independency are described. The empirical analysis of IRAs in the mentioned countries is provided in Section 4. In Section 5 the study of

regulatory harmonization in the electricity and renewables sector within the Mediterranean region is reported. Section 6 concludes.

## **2. Rationale behind regulatory agencies' independence**

### 2.1 Restructuring utility industries: the role of IRAs

Introducing elements of competition in traditionally state-managed sectors, requires agencies' independence being substantial in terms of agencies' legitimacy, accountability, and capture risks (Larsen et al. 2005 and 2006). With this regard, IRAs institutional design have to assure: agencies' independence, since the decision making point of view, from the Executive power; agencies' accountability, in front of the elected bodies; and agencies' autonomy, in terms of financial resources to be managed and expertise to be recruited in order to reduce capture risks and asymmetric information problems. Thus, the inception of truly independent agencies has a positive impact on the investment decisions of EU public utilities (Cambini and Rondi 2011). At the level of developing countries, Latin America and Caribbean cases have been largely analysed (Gutierrez 2003; Andres et al. 2006; Correa et al 2006; Andres et al. 2007; Andres et al. 2008). The experience of Chile has been widely examined; being crucial both for reforms' sequencing (Newbery 2001) and their value, the institutional context of the country has been assessed as the main influential factor when reforming the electricity sector (Levy and Spiller 1994; Gutierrez 2003; Zhang et al. 2006). Trillas and Montoya (2011) present an analysis of the evolution of regulatory independent agencies for 23 Latin American and Caribbean countries in the telecommunications industry. Defining agencies' independence in terms of regulators' political vulnerability, the authors show that higher degree of authorities' independence is associated with higher network penetration. Cubbin and Stern (2006) show that, in those countries where an independent agency has been set-up, generation capacity has been improved, confirming the relation between performance of the utility sector and the governance of regulatory institutions.

In line with the experience of the US (Geradin 2004; Joskow 2007), the EU makes the establishment of IRAs at member countries level one of the pivotal element to the competitiveness of utilities. In Europe, the

Great Britain was the first country to adopt IRAs (Saal 2002; Cambini et al. 2012). At EU level, the Directive 2003/54/EC carefully defined the institutional design of regulatory bodies, and provided a first framework for a pan-European coordination among regulators through the ERGEG - European Regulators Group for Electricity and Gas set-up. Then, the Directive 2009/72/EC, part of a third package of directives aimed at utilities liberalization and energy market integration, further stressed the role of agencies, their duties and the need for their effective independence; a strengthened coordination at EU level through the Agency for the Cooperation of Energy Regulators (ACER), was affirmed. IRAs, thus, gradually emerge in the EU regulatory experience as the instrument pivotal to the electricity sector liberalization. Built on the EU domestic regulatory experience, the model of IRAs is the one the EU promotes in the Mediterranean neighbouring countries through partnership programmes and cooperation initiatives.

Coherently with the literature mentioned in this section, the EU action has been directed at influencing those institutional factors that may affect utility reform projects. Thus, EU programmes have been directed at the state capacity building through the promotion of good governance and rule of law. Firstly the Euro-Mediterranean Partnership (1995) and secondly the European Neighbourhood Policy (2004), foster sustainable economic growth and market integration at Euro-Mediterranean level to be defined on shared regulatory standards mainly. The improvement of MENA rule of law and good governance is pursued through technical issues of cooperation, as in the case of the Mediterranean Solar Initiative adopted within the Union for the Mediterranean initiative (2008). Being mainly based on promotion, and adoption, of regulatory standards, EU programmes favour a form of functional Euro-Mediterranean integration, which allow both to circumvent those *“macro-political obstacles that have traditionally impeded the advancement of co-operation in the region”* (Darbouche 2011, p.195), and improve countries' transparency and rule of law. Thus, IRAs have to be viewed in the wider framework of EU rule of law and good governance promotion, being a case of transparent regulatory practices of a country. With this regard, the 2007 Euro-Mediterranean Ministerial Conference provided, for the first time, the assessment of the

regulatory framework for the electricity sector at MENA countries level, including the role of existing regulatory agencies, and the degree of diffusion of EU regulatory standards . Moreover, the EU role as rules promoter was, although indirectly, assessed.

Rules promotion may only partially explains the reasons behind spreading regulatory practices. Following the institutional economics literature, rules are implemented differently depending on countries' institutional endowment (North 1990 mainly) With this regard, Levy and Spiller (1996) highlight how judiciary independence, functioning checks and balances system, veto players and contending social interests, as well as administrative capabilities of a country, are exogenous factors directly impacting on countries' regulatory restraints and independence of regulatory agencies. The relevance of non-economic barriers and administrative capabilities to the implementation of specific policies, such as those for renewables, have been stressed with regards to EU Mediterranean countries too in comparison to northern ones (Lüthi 2010; Lüthi and Wüstenhagen, 2011). The second part of this section, thus, contains study's assumption on explanatory factors for IRAs' set-up at MENA level and the potential impact of countries' institutional endowment on independence of regulatory bodies.

## 2.2 The establishment of IRAs: pitfalls of countries' institutional endowment

The rationale behind IRAs establishment are (Levy and Spiller, 1994):

- the time inconsistency, and
- the regulatory commitments/credibility issues.

Electricity is one of the sectors in which time inconsistency problems arise in association with different and very often contending social interests. In democratic contexts, it is the legislative-executive dynamic, as well as the alternation of parties in power, that reveals such contending interests. Delegating the rules' implementation phase to technical agencies, thus, reduces the instability of the regulatory framework of a country that may be eventually associated to the possibility, for a government, of being replaced by other parties having different preferences, and representing different social interests. With regards to the majority of MENA countries, long lasting regimes show

that such a “risk” of being replaced through democratic alternation of parties in power was almost absent for the past 20 years. Nonetheless, popular uprising throughout 2011 revealed the high degree of vulnerability of consolidated authoritarian regimes. Lack of sufficient checks and balances between domestic institutions, strong power of incumbents, poor level of rule of law and good governance, and a bureaucracy largely dependent by the ruling élites, are those institutional factors characterizing MENA endowment.

In such a context, the rationale behind IRAs’ set-up may be viewed as strengthening incumbents’ regulatory discretion to the expenses of eventual opposition forces, and parties, in case of regime change. With this regard, the close relation between bureaucrats and incumbents makes government’s self-binding, through effective IRAs’ autonomy in decision making, less severe than expected. The close relation between bureaucrats and incumbents reinforces the capacity to infiltrate bureaucracy by élites in power (Gilardi 2005a). Similarly, the lingering relation between incumbents and bureaucrats strengthen bureaucratic élites, making bureaucrats one of most relevant players in the region. Being MENA a public-driven economy mainly, bureaucrats are influent actors in those reforming processes that involve the utility sector too. To certain extent, bureaucrats may infiltrate elite in power, having developed that knowledge and technical expertise necessary for influencing the implementation of rules and reforming projects; they are those actors that may assure continuity in the sector’ management, and stability of the regulatory framework also in case of unexpected regimes change, such as the ones occurred during 2011-2012.

The second reason behind IRAs’ set-up and independence is the regulatory commitments/credibility. Regulatory credibility is the sole insurance against the risk of administrative expropriation; when such credibility is lacking, it signals that political commitments towards sector liberalization is missing, and the regulatory environment of the country is not transparent. The stability of authoritarian and monarchical regimes of the last 20 years has not been capable of generating new investments in the electricity directed at improving both cross-border and MENA – EU power exchanges, the latter being limited to the interconnection between Spain and Morocco (Medring 2010). As Levy and Spiller state (1994), the credibility of regulation in



the utility sector is higher in countries in which executive and legislative discretions are reciprocally counterbalanced, than in countries where such counterbalance does not exist or is weak. Missing executive-legislative counterbalance, every form of regulatory intervention may be easily knocked over. In this case, administrative expropriation is a serious risk for foreign investors interested in obtaining a fair return to their investments.

Considering the scenario of MENA countries, the functioning judiciary power remains the sole capable of assuring that degree of regulatory credibility for spurring new investments. The judiciary power, when independent, works as restraint to incumbents' discretion. Thus, the highest is the degree of judiciary independence, the lowest is the regulatory commitment problem. In MENA region, such independence is undermined by poor resources available, arbitrary decisions on judges' appointment and dismissal, as well as career improvements, and incumbents' interference in the administration of justice when verdicts refer to regime opponents mainly (Freedom House 2011).

### **3. IRAs in the Mediterranean region. The Survey method**

This study assumes countries' institutional background, and political cleavages, as relevant for the definition of the country's regulatory governance (Jordana and Levi-Faur 2006; Belloc and Nicita 2011). With this regard, in order to understand the extent of independence of regulators in the Mediterranean region, and the role played by countries' institutional background, the dimensions of decision making autonomy, organizational autonomy, and accountability have been translated into a questionnaire. The survey has been directed at southern Mediterranean energy regulators and electricity companies. The objective of the survey is twofold: tackling the issue of regulators' independence in the Mediterranean region, and provide a measure of regulatory convergence in the area.

The paragraphs that follow clarify data collection and assessment of independence index methods.

### 3.1 The data collection

Questions in the survey refer to standards for electricity sector liberalization mentioned in EU documents and plans for cooperation adopted since the 1996, when the Euro-Mediterranean energy partnership was launched in the framework of the Euro-Mediterranean policy. The survey has been launched on January 2012 with the support of the Mediterranean Energy Observatory (OME), Paris. The text of the survey has been firstly tested by experts of the Florence School of Regulation at the European University Institute (EUI, Florence) and the Oxford Energy Institute. Then, invitations to take part to the study have been sent to energy companies and regulators members of the OME and the Association of Mediterranean Regulators for electricity and gas (MedReg).

Moving from MedReg Institutional Group recommendations on minimum requirements necessary for assuring agencies' independence (2008), and previous studies on the issue (Gilardi 2002; 2005 a, b; Johannsen et al. 2004; Larsen et al. 2006), the survey includes questions referring to regulators' competences, internal organization and budget, relation with the political power and stakeholders. It has been structured into an introductory section and 5 sections related to the electricity sector organization and the role of respondents' organization. The introductory section (question 1 to 6) asks to define the organization whose respondents are referring to, distinguishing between national regulatory agencies (IRAs) and other bodies, such as offices, ministry's departments, or companies responsible for the sector. Question on the year of IRA establishment, number of employees and agencies' normative source (ordinary law, regulation, decree etc.), conclude the introductory part. The five sections on the electricity sector organization and the role of respondents' organization, have been organized as follows:

- Section A Energy Sector Organization: Unbundling, Tariff setting mechanisms, the TPA regime and the role of regulators;
- Section B Regulator's competences having regards to License issue, Dispute settlement, Consumers' protection;
- Section C Energy Efficiency and Renewables, policies and regulators' role;

- Section D Regulator's Relations with Stakeholders, the political power mainly;
- Section E Regulator's Internal Organization.

### 3.2 Assessment of independence index

Such as in Gilardi (2002) and Johannsen et al. (2004) studies, in order to measure agencies' independence we adopt binary variables (i.e.: yes or no) varying between 0, absence or very low degree of independence, and 1, independent agencies. Then, on the base of answers received, the index of regulators' independence has been defined as a simple average of the scores of the three dimensions of independence we consider. As in previous studies by Correa et al. (2006), Brown et al. (2006), and Andres et al. (2007), our analysis defines three sub-indexes for the assessment of both formal and substantial aspects of regulatory agencies' independence. Specifically, as for Andres et al. (2007), decision making legitimacy, autonomy, and accountability of regulators are dimensions on the base of which regulatory performance in each country is measured and is considered in the sub-indexes definition. The independence of IRAs is, thus, described in relative terms: each single dimension for which IRAs are independent relatively contributes to the independence of the agency (Hanretty and Koop, 2009). Thus, sub-indexes for each of the three dimensions considered are available, together with an overall independence index. Answers are reported for each dimension of independence considered.

Data referring to countries that have not established an IRA have not been considered in the index assessment. Data referring to countries and organizations that did not answer to the survey, but of which information are available in the literature have been considered for both index assessment and the description of the regulatory framework of the electricity sector in order to provide for the organization of all available information for the entire region. The literature we refer to consists of Country Reports from the "Paving the way to the Mediterranean Solar Plan" initiative (2012) and the Euro-Mediterranean Ministerial Conference, Limassol (2007). The Presentation of Algerian authority CREG, taken on May 2011 at

European University Institute during the MedReg training seminar, is also considered.

#### **4. Dimensions of independence of regulatory agencies in the Mediterranean region**

With the aim of defining the current regulatory framework in the Mediterranean region, and harmonization with the EU system, the data here reported includes countries involved by the European Neighbourhood Policy – Algeria, Egypt, Israel, Jordan, Lebanon, Morocco, Tunisia - and countries candidate to the European membership – Turkey and Croatia . Table 1 reports data on organizations that participate to the survey, while table 2 refers to data for those countries that did not reply to the questionnaire. These data allow to make comparison and to identify the eventual rules convergence processes among some of the most interesting cases for the electricity sector organization and renewable energy policies throughout the Mediterranean.

##### 4.1 Decision making autonomy

Data referring to independence of IRAs in the implementation of different regulatory tools are summarized in Table 3. The Table reports exclusive and/or shared competences having regards to sections A and B of the survey.

Table 3 shows, among MENA countries, only Jordan ERC may be defined as fully independent under the first dimension here considered. Jordan's authority is fully competent for those aspects identified as pivotal to sector's liberalization: Unbundling, TPA and tariff setting. The other well performing agency is, to this stage of analysis, the Turkish one. The Turkish EMRA has, with the sole exception of tariffs' definition, decision making powers on all regulatory issues given in the survey. For those Mediterranean countries for which an IRA does not exist, the electricity sector's most sensitive aspects are co-managed by public companies and central administration apparatus.

These results confirm the important role of central administration and executive power, as described in Section 2. It is the executive,

indeed, that has the final decisional power on many features of regulatory intervention. Thus, when looking at those issues on which credible regulatory commitments and independence of regulators are measured in this study – unbundling, TPA and tariffs’ setting - we may conclude that IRAs in the Mediterranean area are not truly autonomous and independent in the decision process.

#### 4.2 Regulators’ organizational autonomy

The data available for the regulators’ internal organization and autonomy are reported in Table 4. Here we summarized findings from section E of the survey. This section has been organized following those organizational features “universally recommended” and fundamental in order to assure agencies’ independence (Johannsen et al. 2004). It represents an opportunity to define the degree of independence of energy regulators looking at internal procedures for the organization of the work and its management within the organization.

With regards to decisions on the regulators’ internal organization, this competence is shared between the regulator and the legislative power in the Egyptian and Jordan case; it is full competence of the regulator in the Croatian case. Turkish agency answers to the question generically and simply refers to the law as the normative source at the base of regulators’ internal organization; thus, it has not been possible to attribute any quantitative measures. With regards to the personnel policy, it is a competence that the IRAs shares with the legislative power in the Egyptian, Jordan and Turkish case. Such as for decisions on the agency’s internal organization, in the Croatian case personnel policy is under the sole competence of the regulator. Looking at the organizational structure of the IRAs’ board, the model of Regulatory Council is the most selected one compared to the Single Head Regulator.

In the study, Regulatory Council model is provided with higher scores than Single Head model, being convinced that a collegial board is more independent than a single chief, usually directly appointed by the executive head. Finally, with regards to IRAs budget, low scores are registered. Information on budget autonomy and approval describe one of the most important aspects of organizational autonomy of regulators: it provides knowledge of regulator’s potential for using

resources independently from the political will, including the possibility to appoint experts and qualified human resources. The executive power is competent for the Regulator's budget definition and approval. The IRAs budget is generally defined for 1 year.

The index we calculate shows the poor degree of autonomy of IRAs from southern Mediterranean countries. Croatia is the best performing, while Jordan is now ranked a 0.44 as Egypt and Turkey is only 0.31. As reported in Section 3 on index assessment, missing data for Israelian and Algerian authorities makes the assessment of the dimension 2 of agencies' independence impossible.

#### 4.3 Regulators' relationship with the political power, and accountability measures

Answers to questions on accountability provisions are summarized in Table 4. Section D of the survey is entirely dedicated to this dimension of independence. In this part of the study, we look at effective regulators' independence from all those actors interested in limiting regulators' actions. Such as for dimension 2 of independence, the assessment of the third dimension of independence for Israelian and Algerian agencies is impossible due to missing data.

The relation between regulators, on one side, and the political power and stakeholders, on the other side, is relevant considering the risk of a façade independence, such as in those cases when the regulator derives instructions from the executive power. Firstly, we asked respondents to identify, among the options provided, the model that characterizes relations between IRAs, the executive power and the stakeholders. The options provided in the survey refer to three kind of relations: advisory, ministry, and independent model.

In the first case no compulsory decision are taken by regulator, which is a sort of specialised councillor of the government. It is the government that has direct relation with stakeholders. In the ministry model, the regulator is an office, or department, within the executive. It has no autonomy, and cannot entail direct relations with stakeholders, except for those taken on behalf of the government or ministry. In the independent model, the regulator does not require approval from the executive power for taking decision on regulatory aspects and is autonomous in using regulatory tools, as those identified in the first

dimension of independence. With the exception of Egypt, that chooses the ministry model, the other respondents selected the independent model. We controlled these answers with those provided under dimension 1 – regulatory competences. Considered the missing exclusive competences on unbundling, TPA and tariffs' setting, we scored such a choice with 0.75 in the Turkish and Croatian case. All of them affirmed IRAs not having full competences on tariff setting, mainly. This adjustment allows controlling the coherence of answers provided.

With regards to the role of the executive power in case of appeal against regulator's decision, it should be stressed that Courts/Administrative tribunal is the option chosen by all IRAs respondents. The role of judiciary power is relevant in countries in which the sole limit to incumbents' discretion is represented by an independent magistracy. With regards to MENA countries, as explained in Section 2, the independence of magistracy may be defined at risk of being undermined by groups in power, with the sole exception of Israel, Turkey and Jordan.

Finally, the section closes with two questions related to obligations of the regulator in front of the executive and legislative powers. The answers to these questions directly assess are the accountability dimension of independence. Survey's answers confirm low independence from the executive power in the EgyptERA case. The Egyptian agency has to submit an annual report to the executive for approval; while, there are no accountability provisions related to relations between the regulator and the legislative power. Jordan ERC is not required to receive approval or to inform both the executive and the legislative of its work. Turkish EMRA need to inform both the executive and legislative powers; while Croatian HERA need to inform the executive power and submit an annual report for approval to the legislative power. The sub-index defined, thus, register very low values of independence for the Egyptian authority, while highest values are registered by Croatia and Jordan.

#### 4.4 Independence index

As mentioned in the paragraph 3.2, a final index of independence is assessed as single average of the three sub-indexes defined. Table 6

reports the final data. On a scale from 0 to 1, none of the investigated agencies are graded with 1, full independent IRAs. Jordan and Croatia are among non-EU countries, those better performing. In the Croatian case, being the country candidate to the EU membership, a direct influence of the EU can be identified. Such direct influence, we may conclude, works better than in the Turkish case. Jordan confirms to be an interesting case in terms of regulatory commitments. Although a monarchy with strong powers of the executive on the energy sector, Jordan is the sole case of IRA, within the southern Mediterranean, having decisional power on issues such as tariffs. Moreover, Courts may intervene in case of appeal against regulator's decision, confirming the better functioning of the judiciary power as restraints to executive and regulators' administrative discretion, than in other MENA countries. Thus, compared to the other southern Mediterranean countries having already established an IRA and taking part in the survey, Jordan is the most interesting case of regulatory agency conceived as insurance against administrative expropriations.

## **5. Rules harmonization in the Mediterranean region: the electricity sector and renewables**

The final section of the paper analyse the electricity regulatory framework, as well as ad hoc provisions for renewables, resulting from the survey. Information have been reported also for those countries such as Algeria, Israel and Lebanon, that did not take part in the survey. The analysis here developed mainly refers to the section A and C of the survey, which investigates those aspects of the acquis communautaire on energy promoted through the Euro-Mediterranean cooperation, and section E on renewables.

In the first part of section A, question on managing networks, share of Independent Power Producer (IPP), TPA regime and transmission tariff system, have been included in order to understand how much it has been achieved in terms of sector liberalization and the creation of a safe environment for potential private, foreigners included, investors. Specifically, questions from 7 to 12, refers to sector's unbundling; answers are summarised in Table 7.



The unbundling is one of the main aspects promoted at Euro-Mediterranean level in close relation with the adoption of incentive tariffs and the definition of TPA regime. With this regard, all countries in which an IRA exists have unbundled the electricity sector or are expected to complete it, such as Israel, in the immediate future. The exceptions are by Morocco and Tunisia, among survey's respondents, and Lebanon, among non respondents; all of them have not established an IRA. The main characteristic of unbundling in MENA countries is the functional separation of generation, transport, and distribution activities, with the last two activities being under monopoly regime. Moreover, the coincidence between owner and manager of the networks, which are the state-owned companies, persists. Typically, state-owned, and vertically integrated, companies own and manage the distribution network, with the sole exception of Jordan; in this case the Government and the IRA manage the network.

Table 7 reports different percentage of IPP per country with the year in which the system has been defined. The most critical situation is the Lebanese one, where a law for reforming the sector, launched in 2002, is in standby and a regulatory agency is missing. Egyptian low percentage of IPP is also recorded; however, new IPPs are expected in the immediate future when implementing renewables policies with a direct involvement of the regulatory agency, being competent for license issue. The Moroccan case is the one obtaining highest percentage of IPPs. Contracts for energy production, with guarantee of purchase by the state-owned company ONE, have been concluded with companies Jorf Lasfar Energy Company (JLEC), Compagnie Wind of the Strait (CED) and Electric Power of Tahaddart (EET) (Paving the way for the Mediterranean Solar Plan - Moroccan Report, 2012). Tunisian and Jordan IPPs percentage are the same as for Turkey. IPP concessions are provided though a tender, both in the Tunisian case (with the state-owned company STEG as Single Buyer) and in Jordan. This situation is confirmed for energy generation from renewables too (Paving the way for the Mediterranean Solar Plan - Tunisian and Jordan Reports, 2012).

The analysis proceeds with the study of the transmission tariff system and TPA regime. With regards to transmission tariffs, the survey asks to choose among the following options: cost plus/ rate of

return (RoR), price cap, and revenue cap (Vogelsang, 2002; Joskow, 2008). As Table 8 shows, Egypt, Jordan, and Croatia selected, as current transmission tariff, the RoR; Turkey indicated the revenue cap. Considering previous studies on the argument, Algeria adopts a cost of service mechanism, as well as Israel (European Commission 2007). Considering that respondents did not answered to the question on the tariff structure (question 14 in the Annex), the emerging scenario refers to the main literature on the argument. We may argue that MENA regulatory framework is characterized by limited incentives for innovation, requiring RoR “revenues to track costs closely” (Armstrong and Sappington 2006; Guthrie, 2006), although guaranteeing a fair rate of return. The RoR consists of defining a “normal profit or rate of return on the firm’s regulatory asset base after allowing for efficient capital and operating costs” (Parker 2002, p.501). The RoR includes a profit margin the regulator allows to the company, or that the regulator and the company agree in between them; it allows investment costs to be recovered. The price cap stimulates cost efficiency through the use of index of productivity change set for a specific regulatory period; such index is adjusted for changes in input prices, quality and efficiency targets imposed by the regulator. Letting costs and prices diverge during the regulatory lag, provides firms incentives to implement cost reducing investment and innovations (Egert, 2009; Cambini and Rondi, 2010). Both methods have their pro and cons. The RoR is criticised because of over-investments due to the fact that profit is set according to the size of the asset (Parker 2002). While, the price cap regulation, allowing revenues being divergent from costs during a pre-defined period of time, *“can favour investment on innovation, at least in the short term”*, but *“does not promise specific long-term returns on investment”* (Armstrong and Sappington 2006, p.341). The third option given in the survey is revenue cap. Similar to price cap, the regulator establishes an index for a group (basket) of services and operators may change prices within this basket so long as the percentage change in revenue does not exceed the revenue cap index. Contrary to RoR, in which utilities are allowed to set a rate of return on capital, and price cap where prices are the regulated variable, revenue cap regulation is designed to incentivise companies to increase their efficiency, limiting the amount of total revenue received.

Clear information are missing on TPA criteria. In this case, the authors are aware that having omitted answers' options in the definition of the question results in lacking clarity of information provided. Indeed, a specific TPA regime does not emerge and the role of regulatory agencies is not clear. With regards to the electricity trading, TPA regime when existent permits third parties' access to the transmission network and the subsequent purchasing-selling of electricity at regulated or negotiated prices. The opposite is true when the Single Buyer model exists, and only one buyer buys electricity, usually at the lowest price, by producers and sells it to customers. Regulatory Agencies' role, under a TPA regime, is to set wholesale access regulated charges (Medreg 2010). TPA is maybe the most common element among MENA countries, and the most divergent one between MENA and European countries. While a regulated TPA regime is the most diffused form of TPA in EU countries, the MENA case is still characterized by the absence of such regime and of an effective energy market exchanges.

We may conclude, thus, that the Single Buyer model is the most diffused one at MENA level. Not having yet developed a liberalized market for electricity, the answers provided in the survey confirms state-owned companies as the sole buyers and sellers of electricity. As emerges from the survey, the tools available to regulators for guaranteeing TPA non-discrimination and transparency are: template contracts to be followed by the utility companies in the Egyptian case; dispute resolution between companies and customers are also given. Licensing issue and legal provisions exist in the Jordan and Croatian cases. Algerian 2002 law provided for the introduction of TPA regime. although country studies of 2007 still affirmed that an effective regime still need to be defined. Finally, Tunisian's regulatory framework, allows a generic TPA regime if these parties "satisfy the conditions to access the network"; no further explanation are provided.

In the end, current developments in the field of energy efficiency and renewable sources are analysed. Both are pivotal considering the increasing energy demands from the southern Mediterranean countries and persisting energy dependency from European countries. The Mediterranean area has huge potentials for electricity from intermittent renewable sources; strong coordination between generators and

distributors of the two shores of the Mediterranean Sea is, thus, required. Interconnections at south-south and north-south level raise the issue of defining a shared institutional framework made up of common standards and rules.

Section E of the survey refers to: regulators' competences concerning energy efficiency and renewables, renewables priorities, constraints countries expect to find deploying renewables, their needs, and eventual programming instruments already defined or forthcoming. Table 9 provides a synthesis of organizations competent for energy efficiency and renewables. Energy efficiency and renewables are not the either exclusive nor shared competences of IRAs of the region with the exception of Jordan and Turkey. Ministries, and specific directorates within them, are mainly involved in the definition and implementation of energy efficiency and renewables policies. Maybe due to the very recent interests in the issue, renewables are widely managed by ministries and energy state-owned companies of the southern Mediterranean. The situation is different country by country; it goes from the missing legal framework in which the Lebanese sector develops (the 2002 law for the electricity sector, providing for the establishment of national IRA, has never been implemented and the organization working mainly as the regulator is the state-owned company Electricité Du Liban) to better defined situations, such as the one of Turkey and Jordan where national IRAs have specific competences in the sector. The lacking involvement of regulatory agencies in cases such as Algeria and Egypt, as well as the absence of a Moroccan IRA, raise doubts on the capacity to create a positive environment for investments in renewables generation and energy distribution for three of the countries more directly involved by European, public and private, projects. Moreover, the answers provided in the survey, as well as existing studies on MENA countries, clarifies the existing constraints to energy efficiency and renewables deployment countries have to face. The following have been indicated by the respondents as the most relevant constraints:

- lack of financing due to high costs;
- lack of investments due to low incentives;
- unavailability of adequate technologies at reasonable prices.

The mentioned constraints are typical obstacles when developing efficiency in electricity production and distribution. The high investment costs, the scarce availability of new technologies at accessible prices, may make efforts in promoting energy efficiency and renewables not easily to be remunerated.

Eventually, incentive mechanisms provided have been analyzed. Incentive mechanisms indicated in the survey, are feed-in tariffs; taxation measures; green certificate; tender mechanisms. To improve energy efficiency, competitive tenders are used in the majority of cases, while Feed-in tariffs (FIT) is the instrument mainly used for incentivise renewables. These mechanisms are still managed by the executive power. FIT, as well as Feed-in Premiums (FIP), consists of general purchase obligations at regulated prices granted to operators of renewable electricity plants for the electricity they feed into the grid. FIT, thus, are “preferential, technology specific and government regulated” (IEA/OECD 2008). While FIT is a total price per unit of electricity paid to the producers, FIP is a bonus additional to the electricity market price. Where present, as in the Israelian and Algerian cases, premiums introduce competition between producers in the electricity market. Usually, such tariffs should be defined for a period of 10-20 years in order to guarantee that degree of stability to investments decisions. Indeed, if on one hand, the tariff is regulated, providing a certain degree of security to investors, on the other hand, the FIT may be object of frequent amendments, undermining investors return and the credibility of the regulatory framework for the renewable policy. Thus, also for deploying renewables, countries regulatory culture and regulatory commitments matter.

## **6. Conclusion**

In this paper we report the results from an original survey directed at regulators by agencies, ministry departments and energy companies of the southern Mediterranean area aiming at assessing the extent of regulatory agencies’ independence and the regulators’ tasks in such area. Results show that the electricity sector in Middle East and Northern Africa (MENA) countries is entirely managed by the executive powers and state-owned companies.

Regulatory agencies, when existing, are a sort of advisory body of the government. Having full decisional autonomy on issues such as consumers' protection, dispute settlement and license issues mainly, Mediterranean IRAs miss exclusive competences on unbundling, TPA regime and tariff. The latter three aspects are widely recognised as pivotal to utilities sector restructuring in a more competitive way. In the southern Mediterranean case, the liberalization process mainly consists of functional unbundling: the public company separates into different branches (i.e. Algeria) or different companies for generation, transmission and distribution (i.e. Egypt) but the owner remains the state. The tariff system most used is the RoR, while TPA regime is not clearly defined in the majority of considered cases. With regards to current initiatives for renewables and energy efficiency, the regulatory framework that emerges at regional level question the viability of investment projects considering the risk of not having a clear discipline for new independent producers accessing grid networks and the persisting model of Single Buyers (i.e. state-owned companies).

This study shows that, consistently with the literature on the rationale behind the establishment of independent regulatory agencies, countries' regulatory commitments are more clear and the sector better performing in those countries registering the highest degree of agencies' independence than in those having poorly independent regulatory bodies. With this regard, Jordan, Croatia and Turkey, are the most advanced countries in terms of unbundling, which is completed in all three cases, and TPA regime, which is regulated such as in the EU model especially for Turkey and Croatian. The situation is confirmed also having regards to the renewable sector. Analysing the data available for IPPs percentage and TPA regime, the study proves that while Morocco and Tunisia, two countries at the centre of current projects for deploying renewables, tend to preserve the dominant position of the state companies and limit potential new entrants, Jordan have defined a regulatory framework allowing for the entrance of new investors. The three countries confirm as the most interesting case, in terms of harmonization with EU standards too; these results, expected in the Turkish and Croatian cases, are quite new in the Jordan case.

Future developments of this study may be directed at assessing the influence that countries' institutional background may have on the

existing and future model of regulation, usually distinguished between market conforming and market controlling model. Finally, an assessment of risks of administrative expropriation may be provided in particular for those countries that are going to attract new investments on electricity generation from renewables but that maintains a vertically integrated system with a tariff discipline regulated by governments.

## Tables



**Table 1 Survey Respondents**

<b>Relation with the EU*</b>	<b>Country Name</b>	<b>IRA's Name</b>	<b>Acronym</b>	<b><i>Other Regulatory Body</i></b>	<b><i>Acronym</i></b>	<b>Sector</b>	<b>Year set-up</b>	<b>N. Employee</b>	<b>Normative source</b>
PC	<b>Egypt</b>	Egyptian Electric Utility and Consumer Protection Regulatory Agency	EgyptERA			Electricity	2001	70	Presidential Degree
PC	<b>Jordan</b>	Electricity Regulatory Commission	ERC			Electricity	2001	85	General Electricity Law No. 64, 2002
CC	<b>Turkey</b>	Energy Market Regulatory Authority	EMRA			Electricity Gas Oil LNG	2001	467	Law no: 4628
CC	<b>Croatia</b>	Croatian Energy Regulatory Agency	HERA			Electricity Gas Thermal energy	2005	57	Energy Activities Regulation Act

PC	Morocco			Office National d'Electricité	ONE	Electricity	1963	8705	Dahir
PC	Tunisia			Ministry of Industry - Directorate general of Energy	MIN	Electricity Gas		20	Function of the ministry

**\*NOTE:** It refers to the relation with the EU. PC: partner countries involved in the cooperation programmes; CC: candidate countries to EU membership.

**Table 2 Missing survey respondents**

Relation with the EU*	Missing cases MENA	IRAs' name	Acronym	<i>Other Regulatory Body</i>	Acronym	Sector	Year set-up	N. Employee	Normative source
PC	Algeria	Electricity and Gas Regulatory Commission	CREG			Electricity Gas	2002	50	Law N. 02-01 February 5, 2002 on electricity and the distribution of gas
PC	Israel	Public Utility Authority	PUA			Electricity	2003	30	Electricity law 2003
PC	Lebanon			Ministry of Energy and Water	MEW	Electricity Gas			

**\*NOTE:** It refers to the relation with the EU. PC: partner countries involved in the cooperation programmes; CC: candidate countries to EU membership.

**Table 3 Dimension 1 - tools available to regulatory agencies and decision making legitimacy**

†	Network planning	Year	Other body*	Tariff setting	Other body	TPA	year	Other body*	License issue	Service quality	Disputes settle.	year	Consumers' protection	Other body*	year	MEAN **
Egypt	N		PC	N	CA	C	NA	NA	F	NA	F	2001	F		2001	0.50
Jordan	F	2002		F		F	NA		F	F	F	2002	F		2002	1.00
Turkey	F	2002				F	2002		F	F	F	2002	F		2002	0.86
Croatia	F	2005			CA	F	2006		F	N	F	2006	S	M	2006	0.64
Tunisia	N		PC		CA	S	2009	PC	N	N	F		F			
Morocco	N		PC		CA	N		PC	F	F	N		C			
Algeria††	N		PC			F	2002		F	F	F	2002	F		2002	0.71
Israel††	N		PC	F		F	2003		F	F	F	2003			2003	0.71
Lebanon††	N		PC						C	C			F			

† The table refers to agencies' competences, F: full competent, scored 1; S: shared competencies, scored 0.5; C: consultative role, scored 0.5; N: not competent, scored 0.

†† Data available in the Euro-Mediterranean Ministerial Conference, Limassol (2007), Country Reports.

\*NOTE: it refers to other body having exclusive or shared competencies with the regulator. PC: Public company; CA: Central Administration; M: Ministry

\*\*NOTE: Average of the scores registered for the seven dimensions considered. The value is not calculated for Morocco, Tunisia and Lebanon for which IRAs are not existent.

**Table 4 Dimension 2 -Regulators' organizational autonomy**

†	Internal Organisation	Other*	Personnel Policy	Other*	Internal Structure* *	Other*	Budget definition	Other *	Budget lag	MEAN***
Egypt	S	R-L	S	R-L	O	Board of Directors	S	E	1	0.44
Jordan	S	R-L	S	R-L	RC		N	E	1	0.44
Turkey	By law		S	R-L	RC		F		1	0.31
Croatia	F		F		RC		N	E	1	0.69
Tunisia	F		F						1	
Morocco	F		F		SHR		S	E	3	
Algeria††					RC		N			0
Israel										0
Lebanon										

† The table refers to Regulators' internal organization and decision making autonomy. F, Full competent=1; S, Shared competence=0.5; N, not competent=0.

†† These data have been taken by CREG presentation (May 2011).

**\*NOTE:** O= Other, refers to other body in charge of Regulators' internal organization and/or with which the regulators shared such competencies. R-L= Regulator and Legislative. Score=0.5; E= Executive. Score=0

**\*\* NOTE:** RC= Regulatory Council, Chairman plus Council members and Regulatory Staff. Score=0.75.

SHR= Single Head Regulator, one President plus Regulatory staff. Score=0.5

**\*\*\*NOTE:** Average of the four elements considered

**Table 5 Dimension 3 - Accountability measures**

	The Regulator, the Government and the Stakeholders	Appeal against Regulator's decisions: bodies involved	Regulators' formal obligations towards the Executive *	Regulators' formal obligations towards the Legislative**	Mean***
Egypt	Ministry	Courts	A	N	0.25
Jordan	Independent	Courts	N		0.75
Turkey	Independent	Courts	I		0.56
Croatia	Independent	Courts	I	A	0.81
Tunisia	Ministry	Courts			
Morocco	Ministry	Executive	A	N	
Algeria††	Advisor				0
Israel††	Independent				0
Lebanon					

† The table refers to Regulators' relations with executive and legislative powers, and stakeholders.

††Data available in Algerian CREG presentation (May 2011) and Israel Country Report from the Euro-Mediterranean Ministerial Conference, Limassol (2007)

\*NOTE: When the authority is not full competent for unbundling, TPA and tariff setting (dimension 1), we give Score=0.75 in case of Independent model selection, and Score=0 in case of Ministry model selection.



\*\*NOTE: A: Annual Reporting for Executive Approval, Score= 0; I: Annual Reporting for Executive Information, Score=0.5; N: No obligations towards Executive, Score=1. \*\*\*NOTE: A= Annual Reporting for Legislative Approval. Score= 1; I= Annual Reporting for Legislative Information. Score=0.5; N=No obligations towards Legislative. Score=0.  
\*\*\* NOTE: Average of the four elements considered.

**Table 6 Independency index**

†	D1	D2	D3	Index
Egypt	0.50	0.44	0.25	0.40
Jordan	1.00	0.44	0.75	0.73
Turkey	0.86	0.31	0.56	0.58
Croatia	0.64	0.69	0.81	0.71
Algeria	0.71	-	-	-
Israel	0.71	-	-	-

† The table reports the index of Independence of those regulatory agencies for the electricity sector that took part in the survey and for which data are available in the literature. The index is assessed as simple average of the scores registered for each of the three dimensions of independence investigated.

**Table 7 Electricity sector unbundling**

	Sector Unbundled	IPP%	IPP year	Distribution Network Owner	Network manager
Egypt	Y	10 - 19	2002	Public Comp.	Public Comp.
Jordan	Y	20 - 29	2010	Gov.	IRA
Turkey	Y	20 - 29	2003	Public Comp.	Comp.

Croatia	Y	10 - 19	2004	Public Comp.	Comp.
Tunisia	N	20 - 29	1996	Public Comp.	Public Comp.
Morocco	N	40 - 49	1996	Local Admin.	Public Comp.
Algeria†	Y	25		Public Comp.	Public Comp.
Israel†	E	0.6-20	1996	Public Comp.	Public Comp.
Lebanon††				Public Comp.	Public Comp.

† Data have been extracted from Country Reports delivered at the Euro-Mediterranean Ministerial Conference, Limassol (2007), and more recent reports from the “Paving the way to the Mediterranean Solar Plan” initiative (2012)

†† Data have been extracted from the Country Report released by the “Paving the way to the Mediterranean Solar Plan” initiative (2012)

**NOTE:** Y= Yes; N= No; E= expected;

Public Companies; Private Companies; Local Administration; Gov.=Government, Executive

Comp.: Companies; IRA= the Regulatory agency

**Table 8 Tariff system and TPA regime**

	Transmission tariff	Tariff, year	Regulatory lag	Tariff, previous system	TPA criteria
Egypt	Cost plus/Rate of Return	2010	1	Cost plus/Rate of Return	Template contracts
Jordan	Cost plus/Rate of Return		1		Licenses
Turkey	Revenue cap	2003	3		non-discrimination
Croatia	Cost plus/Rate of Return	2006	1	Cost plus/Rate of Return	

Tunisia	Not applicable				
Morocco	Not applicable				
Algeria†	Cost of service				non-discrimination
Israel†	Costs and fixed rate of return				
Lebanon					

† Data taken by Country Reports delivered at the Euro-Mediterranean Ministerial Conference, Limassol (2007).

**Table 9 Energy Efficiency and Renewables**

	Energy Efficiency (EE) Authority	Year	Renewables (RES) Authority	Year	EE Incentive system	RES Incentives*	RES Objectives (%)	RES Objectives (year)
Egypt	ad hoc IRA		New and Renewable Energy Authority (NREA)	1990		FIT; TE		
Jordan	Ministry		ERC		TE; Time based pricing; energy audits	FIT; TE; TAX	11% to 15 %	2016 - 2020
Turkey	Ministry	2007	EMRA		White certificates; energy audits	FIT	26% to 30%	2021 - 2025
Croatia	ad hoc IRA	2006	Ministry	2007		FIT	11% to 15 %	2016 - 2020

Tunisia	Ministry		Ministry	2011		TE	<10%	2010 - 2015
Morocco	Ministry		Ministry	2009	Time based pricing	FIT	16% to 20%	2016 - 2020
Algeria†	Ministry		Renewable Energy Commissioner - Ministry			FIT;FIP;TAX; Bank loans	40%	2020
Israel†						FIP	10%	2020
Lebanon†	Ministry - Lebanese Center for Energy Conservation		Ministry - Lebanese Center for Energy Conservation			Bank loans	12%	2020

† Data have been extracted from the Country Reports released by the “Paving the way to the Mediterranean Solar Plan” initiative (2012)

\*NOTE: Feed-in-tariff=FIT; Feed-in-Premiums=FIP; Tax Measures=Tax; Tender=TE; Green Certificates=GC





## **Annex**

### **Survey text**

1. What is the Organization you are referring to?

Please select one of the two options:

- National Regulation Authority for Energy IRA;
- Other regulatory body responsible for Energy sector (i.e.: Ministry departments, Offices) OTHER BODY.

2. Please indicate the name of this Organization.

3. The Regulator you are referring to is responsible for:

- Electricity
- Gas
- Electricity and Gas
- Other, please specify

4. In which year has the Regulator been established?

5. Could you please type the number of employees?

6. Please indicate the normative source that established the Regulator

#### Section A: Energy Sector Organization

7. Has the sector been unbundled (separated) into generation, transmission and commercialization?

- Yes
- No
- Forthcoming, please specify the year

8. Who is responsible for network planning approval and since when?

- Public company
- The Regulator
- Ministry/Government
- Other.

9. Please specify the percentage of energy produced by Independent Power Producer (IPP) for 2010

10. When the IPP system has been established?

11. Who is the distribution network owner?
  - Public company
  - Ministry/Government
  - Local administrations
  - Other.
12. Who is the distribution network manager?
  - The owner and the manager coincide
  - Other.
13. Who is responsible for tariffs definition?
  - The Regulator
  - Public company
  - Public Authorities central administration
  - Public Authorities local administration
  - Other.
14. Please indicate the tariff structure set by the regulator in a synthetic way (i.e. by using formula)
15. Which is the transmission tariff mechanism adopted?
  - Cost plus/Rate of Return
  - Price Cap
  - Revenue Cap
  - Other.
16. Since when the chosen transmission tariff mechanism is applied?
17. What is the regulatory lag (length of time between tariffs rate reviews)?
18. Which was the previous tariff mechanism implemented?
  - Cost plus/Rate of Return
  - Price Cap
  - Revenue Cap
  - Other.
19. Is the Regulator responsible for Third Party Access (TPA)?
  - Yes
  - No
  - Only consultative role

- Sharing competences with other bodies, please specify
20. Since when the Regulator is responsible for TPA?
21. What kind of means the Regulator dispose for guaranteeing TPA non-discrimination and transparency?
22. Can you please specify criteria provided by your legislation?

Section B: Regulator competences

23. Is the Regulator's competent for authorization procedures (i.e.: licensing the network access etc)? If yes, please type for which aspects he is competent and since when.
24. Is the Regulator responsible of service quality regulation? If yes, please type for which aspects he is competent (i.e. transmission, generation etc) and since when?
25. Is the Regulator in charge of dispute settlement (i.e.: between the authority and energy companies; between companies and their customers)?
- Yes
  - No
  - Only consultative role
  - Sharing competences with other bodies, please specify
26. Since when is the Regulator competent for disputes settlement?
27. Is the Regulator competent for consumers' protection?
- Yes
  - No
  - Only consultative role
  - Sharing competences with other bodies, please specify

28. Since when is the Regulator in charge of consumers' protection?

Section C: Energy Efficiency & Renewables

29. Please indicate the institution in charge of energy efficiency

30. Since when it is competent for energy efficiency?
31. Which are the mechanisms the body competent of energy efficiency has adopted or is going to adopt in the next future?
- tender mechanisms;
  - time based pricing;
  - white certificates markets;
  - energy audits;
  - other.
32. Which are the main constraints the body in charge of energy efficiency found or is expecting to find in implementing the above mentioned instruments?
- lack of financing due to high costs
  - lack of investments due to low incentives
  - lack of private sector involvement
  - unavailability of adequate technologies at reasonable prices
  - lack of political involvement
  - lack of citizens' involvement
  - lack of communication
  - other.
33. Please type the name of the Body in charge of renewables
34. Since when it is in charge of renewables?
35. Is the body in charge of renewables competent in setting incentive policy?
- Yes
  - No
  - Only consultative role
  - Sharing competences with other bodies, please specify
36. Please identify the incentive mechanisms your country have defined for electricity production from Renewables
- feed-in tariffs;
  - taxation measures;
  - green certificate;
  - tender mechanisms;
  - other.

37. Which are the objectives to be achieved by your country in terms of electricity produced from Renewable sources?

38. Which are the main priorities your National Renewable Energy Policy is based on?

- Support to investments
- Research and Development support
- Price definition mechanisms
- Improved Competition among Operators
- Other criteria.

39. Please type the name of the Policy or Programme for electricity production from Renewables you are referring to and the year of adoption?

Section D: Regulator's Relations with Stakeholders

40. How are the relations between the Regulator, the Government and the Stakeholders (i.e.: energy industry; consumers) defined?

- The Regulator is an advisor of the Government. Final decisions are taken by the Government. NO DIRECT relation between Regulator and Stakeholders.
- The ministry model: The Regulator is a body of the Government and has NO DIRECT relation with Stakeholders.
- The independent model: The Regulator is separate by the Government. The Regulator has decision power and DIRECT relation with Stakeholders
- Other.

41. In case of appeal against Regulator's decisions, the following are involved:

- Courts and /or administrative tribunal
- Government Ministry of Energy
- Parliament
- Other.

42. Which are the formal obligations of the Regulator towards the Executive (the President, the Prime Minister and Ministries) Power?

- Presentation of annual report for information only
- None
- Presentation of annual report for approval
- Other.

43. Which are the formal obligations of the Regulator towards Legislative (i.e.: the Parliament, or the Assembly) Power?

- Presentation of annual report for information only
- None
- Presentation of annual report for approval
- Other.

Section E: Regulator's Internal Organization

44. Who decides the Regulator internal organisation (internal procedures, allocation of responsibility, tasks etc)?

- The regulator,
- The Executive power,
- The Legislative power,
- Both regulator and executive,
- Both regulator and legislative.
- Other.

45. Who is in charge of the Regulator personnel policy (recruitment, promotion, salaries)?

- The regulator,
- The Executive power,
- The Legislative power,
- Both regulator and executive,
- Both regulator and legislative.
- Other.

46. Choose the option that better fits with the organizational structure of the Regulator

- Single Head Regulator, one President plus Regulatory staff;
- Regulatory Council Chairman plus Council members, and Regulatory Staff;
- Other.

47. Who is competent for the Regulator's budget definition and approval (i.e.: the government, the regulator)?

48. For what duration of time the budget is defined? (i.e.: annual budget; multi annual budget, in this case please type the number of years).

## References

Andres L., Foster V., Guasch J.L., 2006, "The Impact of Privatization on the Performance of the Infrastructure Sector: The Case of Electricity Distribution in Latin American Countries", Policy Research Working Paper 3936, The World Bank, Washington, D.C.

Andres L., Guasch J.L., Dip M., Azumendi S.L., 2007, "Assessing the Governance of Electricity Regulatory Agencies in the Latin American and the Caribbean Region: a Benchmarking Analysis", The World Bank, Washington, DC.

Andres L., Guasch J.L., Azumendi S.L., 2008. Regulatory Governance and Sector Performance: Methodology and Evaluation for Electricity Distribution in Latin America", Policy Research Working Paper 4494, The World Bank Washington, D.C.

Armstrong M., Sappington D.E.M., 2006, "Regulation, Competition and Liberalization", *Journal of Economic Literature*, XLIV, pp. 325-366.

Belloc F., Nicita A., 2011, "The Political Determinants of Liberalization: Do Ideological Cleavages Still Matter?", *International Review of Economics*, 58(2), pp. 121-145.

Brown A. C., Stern J., Tenenbaum B., Gencer D., 2006, *Handbook for Evaluating Infrastructure Regulatory Systems*, The World Bank, Washington DC.

Cambini C., Rondi L., 2010, "Incentive Regulation and Investment: Evidence from European Energy Utilities", *Journal of Regulatory Economics*, 38, pp.1-26.

Cambini C., Rondi L., 2011, "Regulatory Independence, Investment and Political Interference: Evidence from the European Union". EUI Working paper RSCAS, 42, Florence.

Cambini C., Rondi L., Spiegel Y., 2012, "Investment and the Strategic Role of Capital Structure in Regulated Industries: Theory and Evidence", in: Harrington J., Katsoulacos Y., and Regibeau P., (Eds.) *Recent Advances in the Analysis of Competition Policy and Regulation*, E. Elgar Publishing.

Correa P., Pereira C., Mueller B., Melo M., 2006, "Regulatory Governance in Infrastructure Industries: Assessment and Measurement of Brazilian



Regulators. Public-Private Infrastructure Advisory Facility”, The World Bank, Washington D.C.

Cubbin J., Stern J., 2006, “The Impact of Regulatory Governance and Privatization on Electricity Industry Generation Capacity in Developing Countries”, *The World Bank Economic Review*, 20(1), pp.115-141.

Darbouche H., 2011, “Third Time Lucky? Euro-Mediterranean Energy Co-operation under the Union for the Mediterranean”, *Mediterranean Politics*, 16 (1), pp.193-211.

Egert B., 2009, “Infrastructure investment in network industries: The role of incentive regulation and regulatory independence”, William Davidson Institute Working Paper 956.

European Commission, 2007. Fifth Euro-Mediterranean Ministerial Conference on Energy. Final Report, Limassol.

Freedom House, 2011, Countries at the cross-roads: Algeria, Egypt, Libya, Morocco, Syria, Tunisia, Turkey

Geradin D., 2004, “The development of European regulatory agencies: what the EU should learn from American experience”, *Columbia Journal of European Law*, 11, pp.11-52.

Gilardi F., 2002, “Policy credibility and delegation to independent regulatory agencies: a comparative empirical analysis”, *Journal of European Public Policy*, 9(6), pp. 873-893.

Gilardi F., 2005a, “The Formal Independence of Regulators: A Comparison of 17 Countries and 7 Sectors”, *Swiss Political Science Review*, 11(4), pp.139-167.

Gilardi F., 2005b, “The Institutional Foundations of Regulatory Capitalism: The Diffusion of Independent Regulatory Agencies in Western Europe”, *ANNALS of the American Academy of Political and Social Science*, 598, 84-101.

Guthrie G., 2006, “Regulating Infrastructure: The Impact on Risk and Investment”, *Journal of Economic Literature*, 44(4), pp.925-972.

Gutierrez L.H., 2003, "The effect of endogenous regulation on telecommunications expansion and efficiency in Latin America", *Journal of Regulatory Economics*, 23(3), pp. 257-286.

Hanretty C., Koop C., 2009, "Measuring Regulators' Statutory Independence". APSA 2009 Toronto Meeting Paper. Available at SSRN: <http://ssrn.com/abstract=1449103>.

International Energy Agency (IEA)/OECD, 2008. *Deploying renewables. Principles for effective policies*.

Johannsen K.S., Pedersen L.H., Sørensen E.M., 2004, "Independent Regulatory Authorities, a Comparative Study of European Energy Regulators", AKF Forlaget, Copenhagen.

Jordana J., Levi-Faur D., 2006, "Toward A Latin American Regulatory State? The Diffusion of Autonomous Regulatory Agencies Across Countries and Sectors", *International Journal of Political Administration*, 29, pp.335–366.

Joskow P. L., 2007, "Regulation of Natural monopolies", in: Mitchell Polinsky, A. Shavell, S. (Eds), *Handbook of Law and Economics*, Vols. I & II. Amsterdam: Elsevier Science Publishing.

Joskow P.L., 2008, "Incentive Regulation and Its Application to Electricity Networks", *Review of Network Economics*, 7(4), pp. 547-560.

Larsen A., Pedersen L.H., Sørensen E.M., Olsen O.J., 2005, "Independent regulatory authorities in Europe", AKF Forlaget, Copenhagen.

Larsen A., Pedersen L.H., Sørensen E.M., Olsen O.J., 2006, "Independent regulatory authorities in European electricity markets", *Energy Policy*, 34, pp.2858–2870.

Levi-Faur D., 2005, "The Global Diffusion of Regulatory Capitalism", *Annals of the American Academy of Political and Social Science*, 598, pp.12–32.

Levy B., Spiller P.T., 1994, "The institutional foundations of regulatory commitment: a comparative analysis of telecommunications regulation", *Journal of Law, Economics & Organization*, 10(2), pp.201-246.

Levy B., Spiller P.T., 1996, *Regulations, institutions, and commitment: comparative studies of telecommunication*. Cambridge: Cambridge University Press.

Majone G., 1996, *Regulating Europe*. London: Routledge.

MedReg, 2008. Recommendations on the Minimum Requirements considered as necessary to ensure Independent Regulatory Authorities in the Mediterranean Area. Final Report 11

MedReg, 2010. Heading to an integrated electricity market. Final Report

Medring, 2010. Update Report.

[http://ec.europa.eu/energy/international/euromed\\_en.htm](http://ec.europa.eu/energy/international/euromed_en.htm)

Newbery D. M., 2001, "Issues and options for restructuring electricity supply industries", DAE Working Paper WP 0210.

North D., 1990, *Institutions, Institutional Change and Economic Performance*. Cambridge: Cambridge University Press

OECD, 2002. Regulatory Policies in OECD Countries. From Interventionism to Regulatory Governance, Paris.

Paving the way for the Mediterranean Solar Plan, 2012. Country Reports. <http://www.pavingtheway-msp.eu/index.php?id=917>

Parker D., 2002, "Economic regulation: a review of issues", *Annals of Public and Cooperative Economics*, 73(4), pp.439-519.

Saal D.S., 2002, *Restructuring, regulation, and the liberalization of privatized utilities in the UK*. Birmingham: Aston University.

Stern J., Cubbin J., 2003, "Regulatory effectiveness: the impact of regulation and regulatory governance arrangements on electricity industry outcomes. A review paper". City University London, Discussion Paper No. 04/01.

Transparency International, 2011, Corruption perception index, <http://www.transparency.org/>

Transparency International, 2009, Global Corruption Report

Trillas F., Montoya M.A., 2011 "Commitment and regulatory independence in practice in Latin American and Caribbean Countries", *Competition and regulation in network industries*, 12(1), pp.27-56.

Vogelsang I., 2002, Incentive Regulation and Competition in Public Utility Markets: A 20-Year Perspective, *Journal of Regulatory Economics*, 22(1), pp.5-27.

Worldwide Governance Indicators (WGI). The World Bank

Zhang Y. F., Parker D., Kirkpatrick, C., 2005, Competition, regulation and privatisation of electricity generation in developing countries: does the sequencing of the reforms matter?", *The Quarterly Review of Economics and Finance*, 45(2-3), pp.358-379.