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Euro-Mediterranean Gas Cooperation:
Roles and Perceptions of Domestic Stakeholders and
the European Commission

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Challenging the notion of Fortress Europe, the BORDERLANDS research project investigates relations between the European Union and the states of North Africa and the Mediterranean Middle East (MENA) through the concept of borderlands. This concept emphasises the disaggregation of the triple function of borders demarcating state territory, authority, and national identity inherent in the Westphalian model of statehood. The project explores the complex and differentiated process by which the EU extends its unbundled functional and legal borders and exports its rules and practices to MENA states, thereby transforming that area into borderlands. They are connected to the European core through various border regimes, governance patterns, and the selective outsourcing of some EU border control duties.

The overarching questions informing this research is whether, first, the borderland policies of the EU, described by some as a neo-medieval empire, is a functional consequence of the specific integration model pursued inside the EU, a matter of foreign policy choice or a local manifestation of a broader global phenomenon. Second, the project addresses the political and socio-economic implications of these processes for the 'borderlands', along with the questions of power dynamics and complex interdependence in EU-MENA relations.

Funded by the European Research Council (ERC) within the 7th Framework Programme, the BORDERLANDS project is hosted at the Robert Schuman Centre for Advanced Studies, European University Institute, and directed by Professor Raffaella A. Del Sarto.

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Abstract

The EU external energy policy has triggered heated debate among policymakers, regulators, academia and industrial stakeholders over recent decades. This article maintains that the gas sector has been of less interest to all these parties, because of its inertia and relative backwardness, compared to the electricity and renewable energy industries. However, since the Russia-Ukraine gas disputes, matters related to Euro-Mediterranean gas cooperation are back at the forefront of the energy agenda. The ever-changing nature of the EU external energy policy in the Middle East and North Africa (MENA) region is analysed in this paper by looking at the influence that EU economic interests and approach have had on the southern neighbourhood. The paper provides an overview of the political economy of gas industry development in the EU and its relationship with exporting countries in the Mediterranean basin. It further explores how EU actions and influence as rule promoter are able to provide a valid template for the emerging regulatory framework in the region. While the changing relationship with its southern neighbourhood can be described as part of the process of progressive securitization of energy matters, EU influence can hardly be described as the focal point of gas dynamics in the Mediterranean region. Member States' gas policies appear to have a greater traction, in consideration also of their vast and long term economic commitments.

Keywords:

Energy Security, Energy Market Integration, Natural Gas, Mediterranean Basin

1. Introduction*

The natural gas industry has experienced tumultuous development in Europe in the last five decades. Initially conceived with a domestic dimension, and mainly as a by-product of oil and coal cultivation, the role of gas evolved considerably in the aftermath of the oil crises in 1973. The fast growing European economies of that time were hungry for energy and developed a flourishing regional market, connecting the main import hubs (in Italy, Germany and Spain) with transport pipelines to the large gas exporters in the region, mainly Algeria and Libya in the Mediterranean, and the Russian Federation in the East. In addition, internal European long distance pipelines were also developed, connecting the rich reservoirs in the Netherlands and Norway. The gas market in Europe is currently experiencing one of its many transitions that involve the energy scenarios in the EU. This transition is commonly perceived as a superimposed top down transformation of the existing energy systems, toward a tightly specified target model as defined by the EU institutions (Tholens, 2014). Recent contributions have analysed (Vantaggiato, 2014) and criticised this approach (Rubino, 2014; Escribano 2016, Vantaggiato, 2016) on two grounds. Firstly, it has been argued that a unified approach would not be efficient, in a context dominated by a high degree of heterogeneity: preferences and needs are different and often incompatible among different states and stakeholders. Secondly, it is still unclear what the target model would be, given that the European energy systems vary greatly among Members States (MSs), and a truly interconnected internal market for gas (but also for other goods and services) is far from being a reality. A combination of a “moving” target model, as recently confirmed by the Energy Union communication,¹ and heterogeneous preferences among MS, conspire to obstruct a transition process that is far from being univocal and well defined.

However, while the search for a unifying and all-encompassing movement toward a single end is bound to fail, it is important to explore to which extent EU influence has contributed in defining the dynamics of the gas sector in the Euro Mediterranean region, and we propose to do so by looking mainly at its economic and institutional dimensions. Following the nomenclature of Sarrica et al. (2016), the paper focus on the “societal planes”. Therefore, we will take in consideration in our study the historical normative context, paying special attention to the implementation of the normative and technological framework, with a focus on the economic and regulatory perspective. We will provide, thus, an overview of the political economy of the gas industry in the EU, and of its historical evolution. This will allow us to define the possible divergence between the EU normative power approach and the member states’ energy policies. While not necessarily mutually exclusive, domestic energy policies might look at the development of the Internal Energy Market (IEM) more cautiously than does the European Commission (EC).

In order to perform a societal plane analysis of the Euro-Mediterranean gas scenario, as Sarrica et al. (2016) define it, we look at the economic characteristics of gas markets, which constitute the hard constraint around which energy policies need to be organised. We show that the development of the gas market had a regional dimension at its origin, but it doesn’t perfectly overlap with the IEM, and it has mainly a multipolar shape with the main MS paying a central role in it. We will then take into account how normative production and rule adoption is perceived by energy experts (mainly regulators) operating in 11 Mediterranean countries² participating in this process, by reporting the

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¹ Brussels, 15.9.2015 C (2015) 6317 final

² Survey responses come from 20 energy stakeholders from 11 countries in the region; Albania, Algeria, Bosnia and Herzegovina, Croatia, Egypt, Israel, Jordan, Libya, Montenegro, Palestine and Turkey, including executives from the National Utilities, officers of the relevant Ministries, and Energy Regulators. The panel is therefore representative of the

result of a perception survey submitted to the participants of a training course held in Venice in May, 2013³. The survey, while it has limited statistical validity, identifies the way in which the main actors *perceive* rule adoption and institutional change, in the framework of energy cooperation in the Mediterranean region, and to *observe* the process of rule adoption in 11 countries in the region.

The paper is organised as follows: in the next section we describe the characteristics of the gas market in Europe; we then briefly retrace its historical evolution (in section 3). In section 4 we present the perception survey and its results, and in the final section we draw conclusions from the analysis presented.

2. Economic policy of the gas sector in Europe and its wider neighbourhood

2.1 The European context

Natural gas provides about a fifth of all energy consumed in the EU28 countries. It represents a huge volume, nearly 230 Mtoe/year⁴, which makes Europe the world's second largest market after the United States. In the past 25 years, European gas consumption rose irregularly, but at an average rate of 1% per year⁵ (Figure 1). However, despite this modest increase, particularly if compared with the significantly higher growth of above 5% per year recorded between 1970 and 1990, internal production has not been able to keep up with demand. As a consequence, a growing import dependence⁶, which is now close to 70%, has characterised EU gas policies in recent years (Figure 2). The liberalisation and integration process promoted by the EC that characterized recent decades indeed has had important consequences for energy policies. The result has been to create important constraints on the options available to policy makers, especially in terms of the layout of domestic markets, and to link it directly, in particular after 2006, to the development of the Internal Energy Market (IEM).

The EU Commission has historically played an active role in promoting energy cooperation at the European level. Yet, this was initially confined to coal and nuclear energy because they represented, respectively, the main reasons for concerns for the past and for the future. However, the initial momentum slowed down in the two decades following the creation of the European Economic Community⁷ (EEC) in 1957 and the integration process lost importance. Several factors contributed to this situation including the growing role of oil in the energy basket⁸, the greater scope for cooperation in the energy market⁹ and finally the renewed activism at national level¹⁰ (Matlary 1997, Stern, 1998;

(Contd.) _____

countries involved in Euro Mediterranean cooperation in the energy sector. The survey is aimed at assessing the way energy rule promotion is taking place in the Mediterranean region. Therefore, we explore three sources of pressures to foster rule change and transition: hierarchical approach (top-down), network and bottom-up.

³ The author gratefully acknowledges the Enel Foundation for the support received for the collection of the results during the training course “New challenges for energy system in the Mediterranean Region” held in Venice May 24, 2013

⁴ EU Commission, DG ENER, Unit A4, Energy Statistics, Energy datasheets: EU-28 countries (2016)

⁵ Ibid.

⁶ Energy dependency shows 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 plus bunkers. Gas dependency relates solely to gas import and consumption. Source: Energy dependence (tsdcc310), Eurostat, 2016.

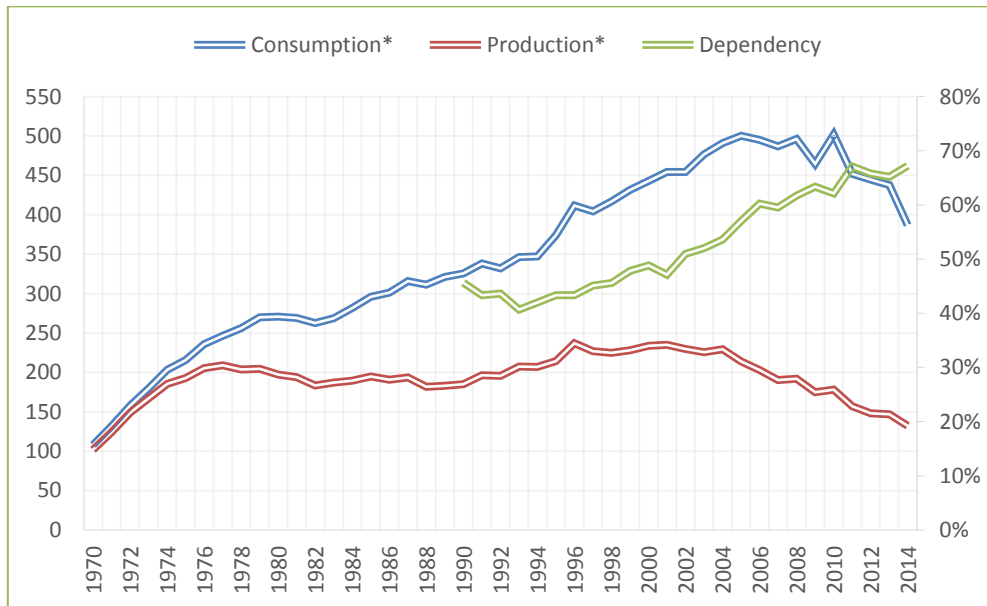
⁷ Established by the Treaty of Rome in 1957

⁸ Unlike coal, this source was mostly traded globally by large multinationals and therefore lacked the conditions for an effective EEC intervention.

⁹ Western European governments had to cooperate at a broader level - including the non-European allies - to cope with the oil crises of the seventies. Those years saw, in fact, the creation of the International Energy Agency (IEA). The IEA was founded in 1974 to help countries coordinate a collective response to major disruptions in the supply of oil. While this remains a key aspect of its work, the IEA has evolved and expanded. IEA now produces statistics and major research

Cameron, 2002; Maltby, 2013). While the EEC was thus further marginalized in sensitive questions regarding oil supplies in the global energy arena, European governments favoured a quasi-monopolistic control of energy markets - electricity and gas - by their 'national champions', reducing further the space for regional integration.

Figure 1 Natural Gas – EU 28



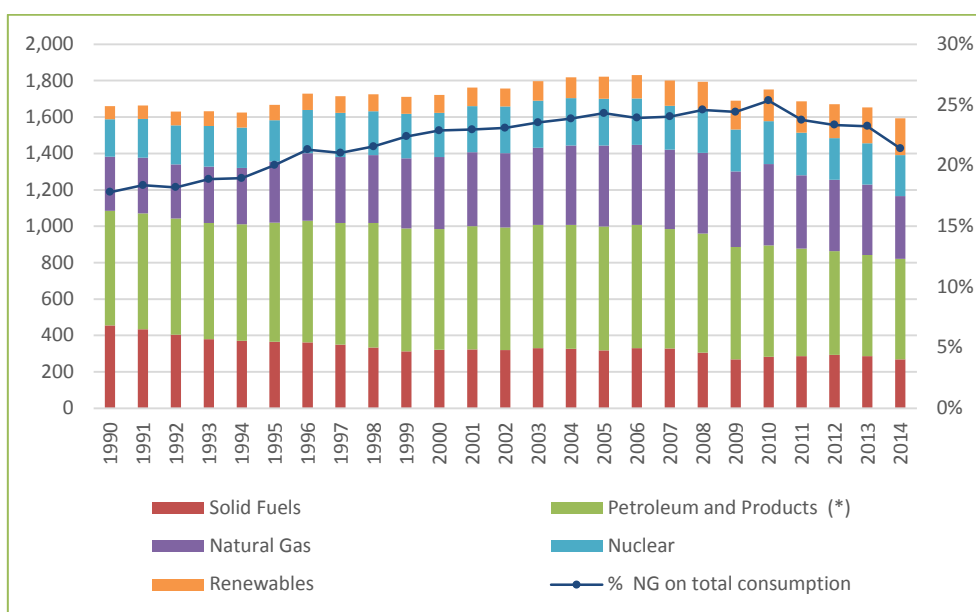
Source: BP Statistical Review of World Energy June 2015

(*) Excludes Estonia, Latvia and Lithuania prior to 1985 and Slovenia prior to 1991.

(Contd.) _____

documents also looking at a more global dialogue, in recognition of the growing role of the developing countries in energy consumptions and production. For an overview of IEA history refer to Scott, Richard (1994). The History of the International Energy Agency 1974-1994, IEA The First 20 Years, Vol. 1, Origins and Structure, OECD/IEA, Paris, pp. 32-33; [http:// www.iea.org/textbase/nppdf/free/1990/1- ieahistory.pdf](http://www.iea.org/textbase/nppdf/free/1990/1-ieahistory.pdf)

¹⁰ Domestic policymakers sought successfully to bring back into the picture their own national energy policies. The principal mechanism for this trend was the establishment of large publicly owned, vertically integrated national companies: Ente Nazionale Idrocarburi (ENI) in Italy (in 1953) on this see Bini (2014); Gas de France (GdF) in France (in 1949) refer to Picard (1985); Viag and RWE in Germany; British Gas (1948) and British Petroleum in the UK; see Veljanovski (1988).

Figure 2 Gross Inland Consumption

Source: DG ENER, Unit A4, Energy datasheet, 2016

(*) crude oil and other petroleum products

2.2 The international context

The growing dependence of European countries on imported hydrocarbons forced national operators to pursue broader strategies to secure supply from international markets: it was no longer enough to guarantee adequate national investment to foster economic growth, but it was also necessary to ensure their own countries the fuels needed for industrial competition. The same international context was instrumental in increasing the importance of national energy companies as devices and actors of the foreign policy of the European countries. The possibility of pursuing national interest abroad without suffering too much competition in the domestic market, and the prospect of being directly connected to governments for their strategic business choices, made gas companies an important instrument of foreign policy (Prontera A., 2015; Westphal K., 2014; Conticchia et al., 2011).

As a consequence, geopolitical factors, economic concerns and matters of intertwined political opportunity coalesced, providing the gas sector an important dynamism in international relations in Europe and in particular after the first oil crisis of the seventies¹¹. Natural gas appeared the best solution to be a valid alternative to uncertain oil supply, resulting in the development of a regional market for gas and a deepening of relations with supplier countries, mainly Algeria, Libya and Russia. The 1973 ‘energy crisis’ also highlighted concerns about energy supply vulnerability in Europe, but as a response to the exposed weakness, European countries developed individual solutions (Kirchner and Berk, 2010) that ranged from indigenous nuclear (in France), to North Sea oil and gas cultivation (for the UK), and to diversified supplies (Italy and Spain). The preferred business model was to tie the price of natural gas to the price of crude oil, and to use long term contracts that sometime explicitly

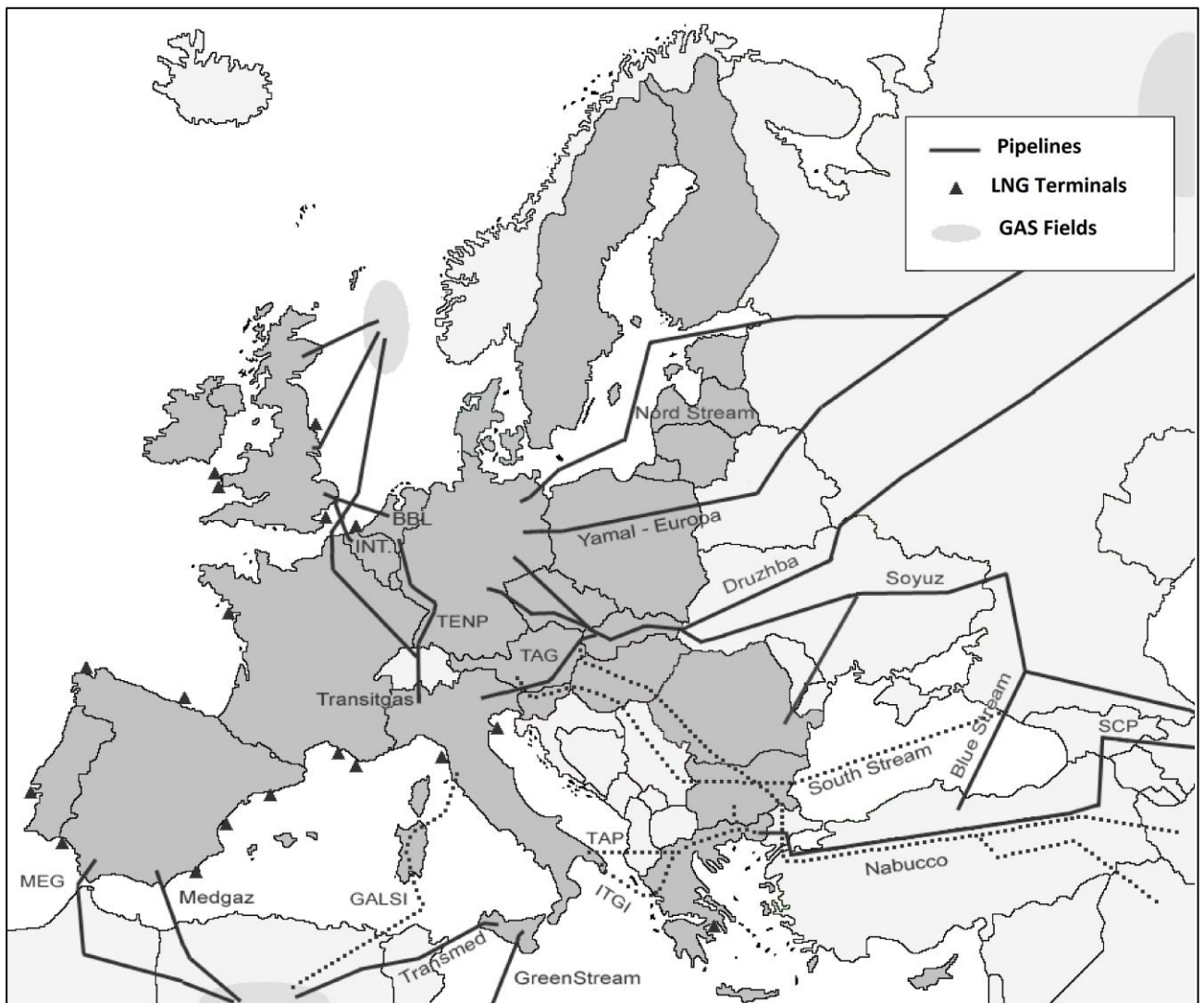
¹¹ The 1973 oil crisis began in October when the nominal price of oil quadrupled over the course of half a year. The oil shock was caused by the oil embargo proclaimed by the members of the Organization of Arab Petroleum Exporting Countries (OAPEC, consisting of the Arab members of OPEC plus Egypt and Syria). By the end of the embargo in March 1974, the price of oil had risen from \$3 per barrel to nearly \$12 globally. See Lutz Kilian, 2014.

included the take or pay clause¹². This, on the one hand, has developed long term ties with gas suppliers and achieved large infrastructural investments, but on the other, has historically limited the development of a flourishing natural gas market in Europe, and in southern Europe in particular.

The advent of major European imports of gas from the then Soviet Union and North Africa required substantial investment in long distance pipelines, distribution systems and storage facilities. This investment was underwritten by long term gas contracts with durations reaching 25 and 30 years, with take-or pay requirements and the gas price linked to that of gasoil and fuel oil. In this construct the ‘buyer took the volume risk, and the seller took the price risk’ (Miriello and Polo, 2015; Stern and Roger, 2011; Heather, 2015) and the contracts included provisions for adapting prices to changing market conditions at regular intervals (Energy Charter, 2007). This was possible because the respective domestic markets were dominated by large vertically integrated utilities on both sides of the pipelines. Most of these long term contracts (LTCs), after more than 40 years, are still in place in the Mediterranean exchanges (Heater, 2015 p. 14). Moreover, the long-term contracts left no necessity, room or incentive for diversification. LTCs represented a counterweight to the supplier’s duty to maintain the necessary level of production.

Natural gas imports by European countries have historically developed in four main directions (Fig. 3) showing an appreciable level of differentiation and variety, with important - and positive - effects on energy security.

¹² ‘Take-or-pay’ clauses, which are commonly found in gas contracts, have had a fundamental role in developing natural gas markets, in order to make possible huge up-front investments needed for exploration, production, transportation and distribution facilities before the gas can be sold. In order for gas producers/sellers – who have invested these colossal amounts of funds - to secure a certain minimum income stream, take-or-pay clauses which require that gas has to be paid for whether taken or not are characteristically inserted in long-term gas sales agreements (see Azazino, 2012).

Figure 3 – Main gas Import pipelines

Source: Entso-G (2015) and Verda , M. (2011)

3. The evolution of the gas market structure in Europe

3.1 Two different logics at play

EU energy policy, since its very beginning, at the time when the Economic Coal and Steel Community (ECSC) was formed in 1951, has carefully looked at energy cooperation, and in particular at nuclear power, as the driver for future economic growth (Kanellakis et al. 2013). Since its early stages, the gas industry was dominated by a bi-lateral relationship between importing and exporting countries where security of supply is the necessary counterpart of security of demand. The main actors of this commercial and strategic interactions were national decision makers, usually represented by their national energy champions, typically state owned companies in charge of the entire supply chain (from exploration to retail) in their respective domestic markets. The establishment of national gas monopolies represented an efficient tool to balance the role and weight of the state enterprises (legal monopolies) that dominated the gas sector in the exporting countries (Kirchner and Berk, 2010; Maltby, 2013).

However, this situation changed dramatically in many countries thanks to the progressive liberalisation process of the energy markets promoted by European institutions during the 1990s. The starting point was the opening up of the transportation network to TPA – ‘third party access’ the first step necessary to promote a competitive development of the wholesale market. The opening up of the network system imposed a new organisational style based on competition between producers. This new model discriminates between phases in which competition is possible and others, characterised instead by monopolies (Joskow, 2005; von Hirschhausen, 2008). Distribution and transportation networks are considered natural monopolies, where competition is impossible and therefore controlled by a regulating body that has to ensure access to every firm, whereas the production and the selling (wholesale and retail) are free activities based on competition¹³.

An unbundling process¹⁴ was developed in parallel with the opening up of the network system, separating the different activities undertaken by formerly integrated firms at least at the accounting level. This new model was adopted initially in England in 1990 and was later implemented by the European Commission, with two similar proposals regarding the electricity and natural gas markets¹⁵. Existing monopolies in MS were forced to transform into firms competing for market shares. The progressive imposition of this model (Maltby, 2013) relied on the perception that integrating the EU gas market, from national to European level, could represent an opportunity to introduce competition at a larger scale leading to greater benefits for the final consumers.

This market paradigm is crucially based on the consideration that the creation of a functioning competitive market is possible, and most importantly, desirable, from a welfare perspective. According to its proponents, and to the EC in particular, the liberalised market reduces monopoly rents, while consumers demand ensures the necessary infrastructures are in place in a timely manner. However, while the EC has been one of the main proponents of this approach (Haase and Bresser, 2010), very limited empirical research has been conducted to test the appropriateness of these assumptions for gas markets. As a consequence, this model based on liberalisation of potentially competitive markets has not been universally adopted. Actually, the contrary is true. The so-called neo-realist logic (Escribano, 2010) is widespread in different countries and regions. In this case the relationships between consumers and producers are defined through bilateral long-term contracts, and national systems are interconnected only with point-to-point connections. Typically, in these systems, “national champions”, traditionally supported by governments, dominate the domestic markets, in which there is only a narrow, or no role, for competition. In the gas sector and in the Mediterranean region the liberalised and the integrated model coexist.

These two contrasting models present advantages and disadvantages. According to Helm and Thompson (1991), one of the main disadvantages of the *neo-liberal logic* is that liberalised markets fail to deliver enough incentives to ensure a sufficient level of investment. This means that, in the long run, underinvestment might result in a failure to meet the security of supply obligations that is one of the cornerstones of the liberalisation process¹⁶. Others (General Energy Council of the Netherlands, 2005; Helm, 2005) oppose the argument that a concentration on the supply side should be balanced by a similar concentration on the demand side (“Power of the Market” argument). Therefore, the

¹³ In this general framework many variables can be added, such as the institutions of different categories of client, or the coordination in the system that can rely on a market mechanism or on mandatory markets.

¹⁴ ‘Unbundling’ is used to mean the separation of the transmission operator from other vertically integrated stages into independent entities. Separation of asset ownership is not required but there are relatively stringent minimum criteria specified to support effective independence and to prevent discriminatory behaviour (e.g. in favour of the generation plant owned by the same company).

¹⁵ Proposal COM (1991) 548-1 “Proposal for a European parliament and council directive concerning common rules for the internal market in electricity” and COM (1991) 548-2 “Proposal for a European parliament and council directive concerning common rules for the internal market in natural gas”.

¹⁶ Together with competitiveness and sustainability.

liberalisation process could potentially undermine the security of supply vs. security of demand equilibrium, developed since the 1970s in Europe against counterparts in North Africa and Russia. Newbery (2001) also raises some doubt that the liberalisation process is able to deliver the expected results in a market dominated by large sunk costs and fluctuating demand.

The economic justification of the liberalisation process for the gas sector (and in general for energy) has always focused on over-investment (Averch and Johnson, 1962), excessive unused capacity and poor efficiency of the monopolistic setup of the energy sectors, whereas liberalised markets are deemed to deliver under-investment. It is useful to understand, in the context of these two second best solutions, whether under-investment or over-investment presents higher social costs. Helm and Thompson (1991) evaluate that the social costs of under-investment are higher than those of over-investment. This evaluation is also confirmed in a later study by von Hirschhausen et al. (2004). A fortiori, if one of the main dimensions to measure the appropriateness of energy reforms is the level of security of supply it manages to generate (Vantaggiato, 2016), a tendency toward over-investment should represent the preferable strategy. Risk aversion from both consumer and company side is a common argument for a more conservative and less competitive market design. The central justification for this proposition stems from the apparent consumer willingness to pay for security of supply¹⁷. While the existing econometric and qualitative studies do not allow us to draw absolute conclusions on this dispute, two main contrasting views are emerging on the role that market and non-market arrangements can play in the context of Euro-MENA gas market development. One, based on the liberalisation of domestic markets, pledges to reduce total system costs, but will provide limited incentives for investment. The other, that refers to a *neo-realist logic* (Escribano, 2010), is able to provide better incentives for infrastructure investments, but with limited room for market competition. Therefore, gas trade relationships in the Euro-MENA region need to be formulated according to a model that conjugates these two different approaches within a stable framework.

3.2 Security of supply, Internal Market and external energy policy

Parallel to the progress on the Internal Energy Market (IEM), the external dimension also gained steam, but while the accent was initially on rule harmonisation, as a step toward market integration, it has now been shifted toward Security of Supply (SoS) (Vantaggiato, 2016). However, the fuller implications of the SoS argument and its dual dimension (internal and external) did not prompt any formal act, until recently. While the mutual relationship between the development of the internal market and its external dimension started to become apparent in the energy sector almost immediately, it took in fact until 2006 for the Commission to issue a formal reference that explicitly coupled the development of the internal market with the European external energy policy. As pointed out by Maltby (2013), external energy policy lacked any “substantive legislation to achieve them”. However, a number of communications highlighted the existence of heterogeneous preferences of member states regarding SoS (European Commission, 1981), and the need to conceive greater diversification, to favour a EC level SoS (Council of the European Union, 1986). A first formal reference to EU-MENA energy cooperation took another 10 years. Significant steps toward a Euro-Mediterranean dialogue (often working only southbound) first appear in 1995, in the context of the Barcelona process,¹⁸ which established a permanent forum with partner countries in the south. The formal aspect of this process consisted in the establishment of the Euro-Mediterranean Partnership (EMP). Energy dialogue was fostered in regular inter-ministerial meetings, also combined with parallel technical round-tables

¹⁷ The willingness to pay is a difficult concept to measure, and hinges upon the assumption that customers are exposed to the real cost of SoS.

¹⁸ The Barcelona Process was launched in November 1995 by the Ministers of Foreign Affairs of the then 15 EU members and 12 Mediterranean partners, as the framework to manage both bilateral and regional relations. It formed the basis of the Euro-Mediterranean Partnership, which has expanded and evolved into the Union for the Mediterranean. It was crystallised in the Barcelona declaration

between the Commission and EMP partner countries¹⁹. The operation of the EMP under these chapters has two complementary layers: the bilateral level and the regional level. The success of this process can be described at best as patchy.

The subsequent development of the Euro Mediterranean dialogue is represented by the establishment of the European Neighbourhood Policy (ENP),²⁰ a programme that included the EU-MENA dialogue in a wider cooperation programme between the EU and its southern and eastern neighbourhood. The ENP was characterised by an unambiguous turn in favour of bi-dimensional negotiations, with constant bilateral actions, directed in particular to strategic countries²¹, and with a regional dialogue in the background. This double dimension became necessary to overtake the deadlocks that the region was experiencing. The new situation introduced by this instrument was greatly influenced by the strong momentum of the development of the Internal Energy Market. The implementation of the second energy package²², coupled with the signature of the Energy Community Treaty (ECT),²³ which determined the adoption of the energy *acquis* in 6 states and territories of the Balkans, meant a significant enlargement of the IEM to territories outside the EU. At the same time the enlargement process tilted the balance of energy dependency on Russian supply (and practically from a single route), shifting the emphasis toward a strong reinforcement of the IEM through its internal progression, which parallels its external enlargement, thus adding weight to its potential bargaining power toward South and East Mediterranean Countries (SEMCs) (Vantaggiato, 2016). However, it took until the disruptions of the gas relationship with Russia in 2006 and 2009 to create

¹⁹ The parties involved were the (at the time) fifteen member states of the European Union and ten states of the Southern and Eastern Mediterranean region: Morocco, Algeria, Tunisia, Egypt, Israel, Palestinian Authority, Jordan, Lebanon, Syria and Turkey.

²⁰ It was conceived after the 2004 enlargement of the European Union with 10 new member countries, in order to avoid creating new borders in Europe. It is also designed to prevent the emergence of new dividing lines between the enlarged EU and its neighbours. The vision is that of a ring of countries, drawn into further integration, but without necessarily becoming full members of the European Union. The policy was first outlined by the European Commission in March 2003. The countries covered include Algeria, Morocco, Egypt, Israel, Jordan, Lebanon, Libya, the Palestinian Authority, Syria, Tunisia in the South and Armenia, Azerbaijan and Belarus, Georgia, Moldova, Ukraine in the East. Russia has a special status with the EU-Russia Common Spaces instead of ENP participation.

²¹ Typically, energy exporting countries and strategic transit countries, such as Algeria, Egypt and Turkey.

²² The European Union decided to implement a series of reform, through the application of successive measure aimed at opening up the domestic market of MS. There have been so far three energy packages. The first electricity and gas directives were adopted in the late 1990s, with the objective of opening up the electricity and gas markets by gradually introducing competition (Directives 96/92/EC concerning common rules for the internal market in electricity and 98/30/EC on common rules for the internal market in natural gas). The second gas and electricity directives, adopted in June 2003, include unbundling, whereby energy transmission networks have to be run independently from the production and supply side. According to the directives, markets for all non-household gas and electricity customers are to be liberalised by July 2004. For private households, the deadline is July 2007 (Directives on electricity (2009/72/EC) repealing Directive 2003/54/EC and gas (2009/73/EC) repealing Directive 2003/55/EC). The EU “Third Energy Package” is a legislative package for an internal gas and electricity market in the European Union. Its purpose is to further open up the gas and electricity markets in the European Union. Core elements of the third package include ownership unbundling, which stipulates the separation of companies' generation and sale operations from their transmission networks, and the establishment of a National regulatory authority (NRA) for each MS, and the Agency for the Cooperation of Energy Regulators which provides a forum for NRAs to work together. (The Third Energy Package consists of two Directives and three Regulations, respectively Directive 2009/72/EC repealing Directive 2003/54/EC, Directive 2009/73/EC repealing Directive 2003/55/EC, Regulation (EC) No 714/2009 on conditions for access to the network for cross-border exchanges in electricity and repealing Regulation (EC) No 1228/2003, Regulation (EC) No 715/2009 on conditions for access to the natural gas transmission networks and repealing Regulation (EC) No 1775/2005, Regulation (EC) No 713/2009 of the European Parliament and of the Council of 13 July 2009 establishing an Agency for the Cooperation of Energy Regulators).

²³ The Energy Community Treaty creates an internal market in electricity and natural gas bringing together the 28 Member States of the European Union (EU) and 6 European states and territories in the Balkans. The Treaty entered into force on 1 July 2006. It is concluded for a term of ten years. Its application was extended for a new ten-year period by unanimous decision of the Ministerial Council dated 24 October 2013. Council Decision 2006/500/EC, OJ L 198, 20.7.2006

the window of opportunity for the Commission to establish once and for all the IEM as the preferred tool, to represent at the same time the stick and the carrot, for both EU member states and South and East Mediterranean Countries (SEMCs) (Maltby, 2013). So the idea of expanding the Energy Community Treaty to the Mediterranean started to gain pace after 2006 as a partial response to the Russia-Ukraine disputes.²⁴

This process implied the definition, and the imposition, of common rules and procedures among member states, which however still have contrasting and competing interests. With this novel approach the development of the IEM becomes the general framework around which EU-MENA energy cooperation needs to be organised, according to the EC. Not without strong resistance, MS have nevertheless implemented the reform packages, with varying degrees of commitment, and sometimes with diverging policies, which crucially depended on the heterogeneous dependence on external energy sources existing in Europe.

4. Perception of the Euro-Mediterranean energy cooperation in MENA countries

Given the way in which the EU has proposed to export IEM rules beyond its borders, it is useful to understand how this model and this approach were perceived, by those expected to operate under this new framework.

The establishment of the EU as a “normative power” initially had mainly an internal dimension. It took some time before the liberalisation process produced a transformation in the role that national states and European institutions played in the internal energy market²⁵. Normative power refers to the way the EU reinforces and maintains its international legitimacy by defending (and exporting) its norms, regulations and institutions (Manners, 2002, Laffan 2001). The “normativeness” of Europe was to be maintained, in the gas sector too, with respect to most member states. When describing the EU as a normative power, a key concept in its external action is represented by the promotion of democracy, the respect of the rule of law and of human freedoms. The internal dimension, on the other hand, is solely devoted to the promotion of market integration programmes that are disconnected from democratization objectives. Therefore, the sole mission relative to the promotion of the internal “normative power” is a transition toward IEM. This huge undertaking produced a shifting scenario that was eventually proposed as a viable model outside the EU. However, the internal process has been relatively slow in the gas sector, especially when compared with the electricity supply industry. This is mainly due to the gas rigid structure and the existence of large sunk costs (physical, in the form of investments in interconnection not yet amortized; and contractual, with the establishment of long term *take or pay* contracts with exporting countries). We argue in this paper that the friction between the Commission and MS is coherent with the intrinsic industrial structure of the gas sector, which has produced a correspondingly highly centralised domestic sector in the past.

At the same time, the EC acted outside its physical borders in order to propose its model on its immediate neighbourhood, with the ambition to create a pan-European harmonised regulatory space. In particular, in the Mediterranean region the mantra proposed, with oscillating emphasis, recommended a range of possible solutions spanning from the voluntary adoption of the internal market paradigm, to formal inclusion into the EU regulatory space with the extension of the Energy Community to the Mediterranean. This gradual process of integration is still in progress and is facing a

²⁴ In the Green Paper entitled “A European Strategy for Sustainable, Competitive and Secure Energy” (2006) the Commission recalled the importance of achieving energy security through a “Pan-European energy community” and the creation of a “common regulatory space” around Europe. A following Green Paper, the Commission’s “An Energy Policy for Europe” (2007), explicitly refers to security of supply, sustainability and competitiveness as the main objectives of the EU energy policy.

²⁵ The internal gas market is often defined as a patchwork. A patchwork of institutions at national, regional and global level combine to shape the internal gas and electricity market (Gialoglou, 2004)

revamped interest in recent years, due to the growing concerns related to the Russia-Ukraine disputes around gas interconnections. It can be reconciled with the three main channels of norm diffusion: bottom-up, top-down and network diffusion.

Today about one quarter of the energy used in the EU is natural gas and many EU countries import nearly all their supplies. Some of these countries²⁶ are also heavily reliant on a single source or a single transport route for the majority of their gas. To respond to the potential threats represented by the dependency from Russian gas exports, in February 2016 the EU Commission released a new regulatory package²⁷. The eagerly awaited “Energy Security Package” focussed on the revised Regulation on Security of Gas Supply, also including a revised EU strategy on LNG and gas storage. The Commission also proposed the establishment of a binding and formal information exchange mechanism, with regard to intergovernmental agreements and non-binding instruments between member states and third countries, in the field of energy. This recent example confirms that SoS is now central in defining the shape and rules both of the IEM and in the relationship with EU commercial partners.

The evidence provided here illustrates the complexities of the task of enlarging the concept of “normative power” to the energy area. The existing internal tensions and resistance regarding the adoption of onerous energy packages, the intersection with the member states’ individual internal and external energy policies, and bilateral relationships with non-EU countries all represent significant hurdles to overcome. In a context where national executives still hold a strong grip on energy matters, the promotion of energy norms and regulations can be described by means of three main channels for rule change and adoption (Cambini and Rubino, 2016; Cambini and Franzi, 2014): bottom-up, top down and network pressures. EU “normative power” in the energy sector has been reaffirmed through different policy instruments that utilize a combination of these three approaches and implement them with varying degrees of success. It is useful then to explore how these approaches have been perceived among energy experts and regulators in South and East Mediterranean Countries.

4.1 The three channels for norm diffusion and adoption

Bottom up pressures refer to the role that national and domestic actors can play to strengthen, or oppose, rule diffusion (Barbè, et al. 2009). Beside policymakers, we have considered also the influence that domestic utilities and civil society action can play in SEMCs countries. Without domestic actor commitment, no rule change is possible. However, the relevant role of executives and their economic branches (utilities in particular) further strengthens the existing systems of power, making the transition less likely, as verified for EU member states (Börzel and Sprungk, 2007) and the eastern neighbouring countries (Petersen 2012; Wolczuk 2009).

Hierarchical top-down pressures derive from the creation of a more institutionalized instrument that the EU was able to develop with some countries belonging to the SEMCs (Rhodes, 1996; Lavenex and Schimmelfennig, 2009). This route led to the creation of a fully-fledged top down initiative, the Energy Community²⁸, in 2006. The Energy Community is the institutional target model for the creation of an EU-South Mediterranean Energy Community, based on the transposition of EU law. This proposal was recalled in the May 2011 communication on “Democracy and Shared prosperity”²⁹ and more recently reintroduced in the December 2013 Union for the Mediterranean Ministerial

²⁶ Czech Republic, Hungary, Poland and Slovakia together with Germany, have a much less diversified gas supply, and they rely on Russian Federation provisions.

²⁷ Brussels, 16.2.2016 COM (2016) 52 final

²⁸ The Treaty establishing the Energy Community was signed on 25 Oct 2005 in Athens by the European Community and then nine Contracting Parties from South East Europe. Following ratification, the Treaty entered into force on 1 Jul 2006.

²⁹ EC, “A partnership for Democracy and Shared Prosperity”, 9.

Meeting on Energy³⁰. According to Tholens (2014), this confirms the existence of the ambition to develop a formal institution in the Mediterranean in “high level policy circles”.

A third way to advance institutional change and rule adoption is via convergence towards a shared target model, with international regulatory standards (Eberlein and Kerwer, 2002; Heritier, 2002). This requires a voluntary convergence promoted by the executive powers responsible for energy policies in the Mediterranean countries, and the existence of a model credible enough to attract such convergence. It also implies the desire or the necessity to demonstrate a convincing commitment toward structural reforms implemented to enhance system stability, or to stimulate sector restructuring, to improve efficiency and eventually attract investment (Barbè, et al. 2009). Network forms of cooperation are the most promising, especially in cases in which strong interdependencies between actors exist. In such cases, networking cooperation would allow the MENA countries to act not as passive beneficiaries of particular promoted rules but, instead, as active participants in the rule definition. However, it means that it has to face potential competition from other competing “models”. Network pressures also stem from the EMP and the ENP instrument implemented by the EU since 2004. A progressive consolidation of the internal EU energy market called for a durable external energy policy, through the promotion of action directed at the creation of cooperation platforms, such as the Association of Mediterranean Energy Regulators (Medreg), which seek to encourage cooperation and convergence in energy regulation across the Mediterranean region.

In order to explore how the said factors are perceived, and to understand the dynamics toward a harmonized Mediterranean energy framework, a perception survey has been launched in two different occasions³¹. Beside official declarations, policy decisions and formal positions that have been extensively analysed above and in the literature³², a perception survey allows us to analyse how the stakeholders involved in the final application of the rules discussed and promoted within the energy context, perceive the entire process³³, and the distinct initiatives implemented in the Mediterranean countries. Perception surveys are increasingly utilized to understand the impact of regulatory intervention. They are commonly used to acquire information from an end-user point of view. The information collected from a perception survey might be used by policymakers for i) how to perform regulatory policy evaluation and design and for ii) communication purposes. Perception surveys therefore represent a useful diagnostic tool, to identify areas of concern to business and citizens and to inform future regulatory reforms. Details of the methodology are explained in Cambini and Rubino (2016), while in the following section we report some of the main results discussed therein.

4.2 Top-down pressures for rules promotion

The survey investigates the role that the EU plays as energy rule promoter³⁴. Figure 4 shows the results collected, which present significant variability, unlike Cambini and Franzi (2014). Countries belonging to the Energy Community register a stronger awareness of the EU role, both via direct and indirect pressure, while energy experts from Egypt and Algeria reported the lowest perceived level of

³⁰ A topic on the agenda was ‘Political discussion on a Mediterranean Energy Community’.

³¹ The results produced here refer to the perceptions survey launched by Cambini and Rubino among participants of the training course “New challenges for energy system in the Mediterranean Region” held in Venice May 24, 2013.

³² For a thorough revision see Cambini and Rubino (2014).

³³ The survey is not statistically representative but provides an overview of the tendency and of the perceptions existing among energy experts and in particular energy regulators.

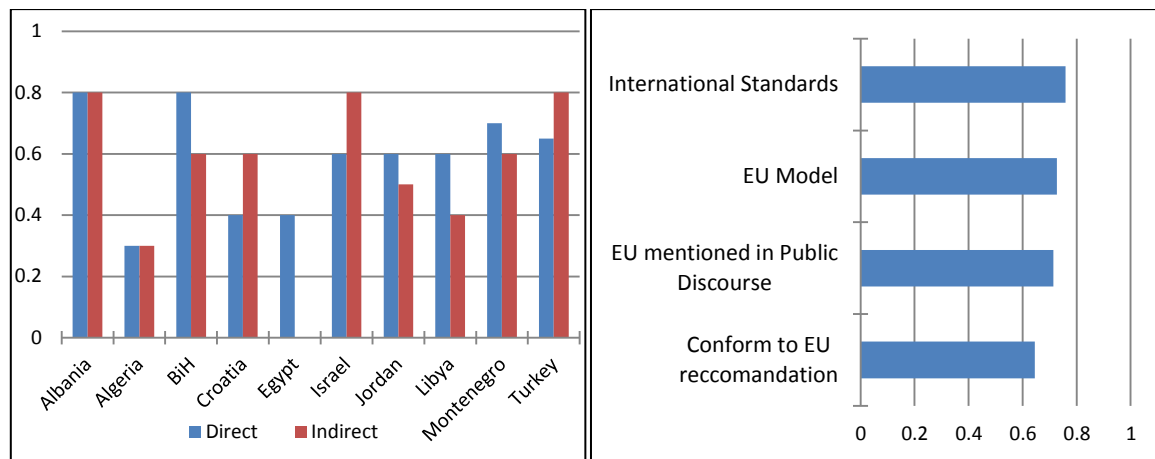
³⁴ The survey asked respondents to express their evaluation on a scale from 0 to 5 to assess participant perception of direct (top-down) pressure compared to the EU indirect one. The question was: “On a scale from 0 to 5, how do you perceive the EU (i.e.: European Commission Directorate for Energy, EU Development Cooperation Office, mainly) methods for energy rules promotion?” The respondent has to choose among three different options: 1) direct pressure (top-down); 2) indirect (horizontal, participatory model); 3) Absence of either direct or indirect pressure.

EU pressure. The result also presents a generalised lower impact of the EU role in rule promotion, compared with the results of the previous perception survey.

Next, the survey assessed the perceived level of adherence, in the Mediterranean region, to the standards and recommendation proposed by the EU³⁵. This answer provides information on the influence of the EU as a “normative power”, not only in the formal adoption of norms but also in its behavioural dimension (Schimmelfennig and Sedelmeier, 2005), where the former refers to the inclusion of EU rules in the national domestic legal system, whereas the latter refers to the consideration of the EU as a model and a reference point for domestic actors (Figure 5). Results highlight that there is a growing role played by other international standards, which are perceived as more relevant for domestic rule promotion than the EU model.

Figure 4 EU pressures for rule changes

Figure 5 Conformity with EU rules system



Source: Cambini and Rubino (2016)

4.3 Network pressures for rule promotion

The survey moved on to explore the role of networks in rule diffusion, looking at the type of relations that characterize the activities of Medreg, the association of Mediterranean energy regulators³⁶. It emerges that the impact of Medreg is portrayed as less influential than the impact of direct or indirect EU actions. The results of the answers to this question are summarised in Figure 6. Both Cambini and Franzini (2014) and Cambini and Rubino (2016) confirm that network rule promotion is based on a participatory model and on a voluntary basis, with limited or no role for monitoring and control of procedures. Typically, lessons learned and acquired expertise are shared among members. These results, which reflect Medreg structural flexibility, crucially depend on Medreg’s lack of mandatory and binding rulemaking powers, and are echoed in the perception of the energy experts interviewed, and in line with the results in Casey and Lawless (2011). However, resource sharing and capacity

³⁵ The survey asked respondents to evaluate on a scale from 0 to 5 their agreement on the following statement: 1) Rules for energy sector organizations are based on the EU model, 2) Energy sector organization are based on Internationally Recognized Standards (IS), 3) EU energy rules are very often mentioned in the public discourse of domestic decision makers, 4) Taking into consideration energy, domestic decision makers tend to conform their behaviour to EU recommendations

³⁶ The questionnaire asked “On a scale from 0 to 5, how would you say that the following options characterise members’ relations within Medreg?” The proposed options were (i) A participatory model of decision-making; (ii) Codified Procedural Rules (with regards to the definition of meeting agendas; voting systems, etc.); (iii) Monitoring and Control Procedures (with regards to principles and rules to be implemented in the energy sector); (iv) Resource sharing (sharing primarily expertise and know-how).

building initiatives represent an interesting area in which to further Medreg activities and reinforce its role in the region.

Figure 6 Medreg - Rules promotion

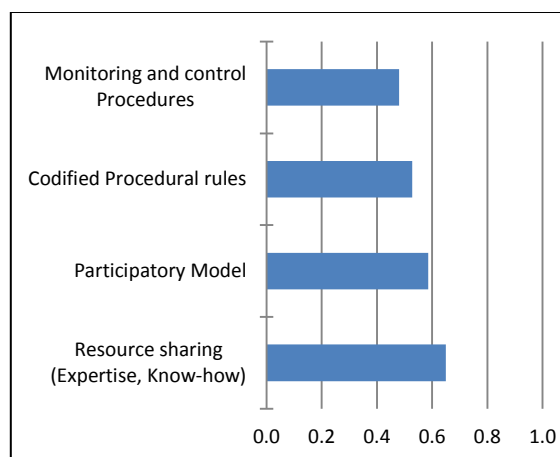
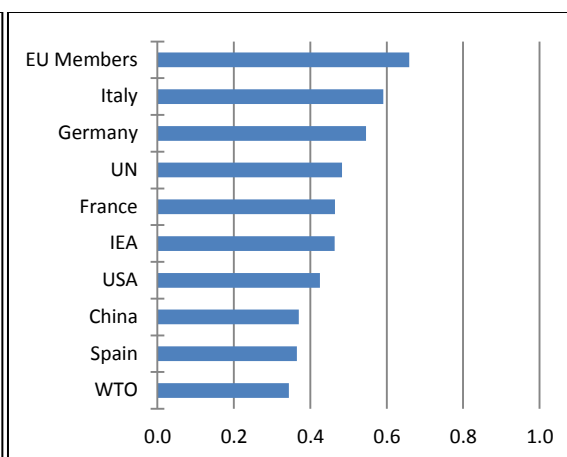


Figure 7 Perception of other international actors



Source: Cambini and Rubino (2016)

The survey then explored whether other international actors and regional networks played a significant role in rule promotion³⁷ (see Figure 7). The question aimed at evaluating the perception of the influence of other possible international actors, particularly in consideration of the external energy policy that single member states can adopt, beside other international networks and institutions (IEA, WTO) and international superpowers. The results obtained underline that there is a number of different stakeholders operating in the region, and that often MSs have a different agenda for EU-Mediterranean energy cooperation, and have a different degree of efficacy in their external energy policy actions. These determine a web of bilateral energy relations within the region that can easily overlap and/or replace the EU external energy policy. Italy and Germany are perceived as the countries able to play the strongest influence in the region. Another striking result is the perception of China as a player in the region. While globally China is not perceived as too influential, its pressure is strongly felt in Algeria and Egypt (Table 1 in the Appendix), suggesting a targeted approach to countries that have a clear leadership in regional dynamics.

4.4 Bottom-up pressures for rules promotion

The survey looks at bottom-up pressures, to measure the perception of the respondents of the impact of domestic actors in promoting rule changes and rule adoption³⁸ (Figure 8). Bottom up pressures are confirmed to be the most relevant, with the highest score, and therefore are expected to play the largest role in the development of energy policy in the region. As expected, the domestic institutional environment plays the main role in defining the sector's reform.

³⁷ The question was “On a scale from 0 to 5, how do you perceive the pressure in favour of energy rules adoption and rules change of the followings actors?”. The options offered were: European Union Member Countries, France, Germany, Italy, Spain, USA, China, UN, WTO, International Energy Agency, other (specify).

³⁸ The question was: “On a scale from 0 to 5, how do you perceive the pressure in favour of energy rules adoption and rules change of the followings actors? The Executive, The President/ The King, The Parliaments, The Civil Society Organizations, Stakeholders, energy industry

Figure 8 Role of Domestic actors

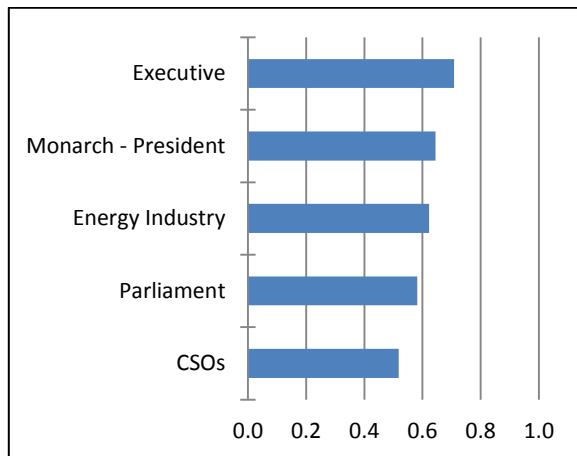
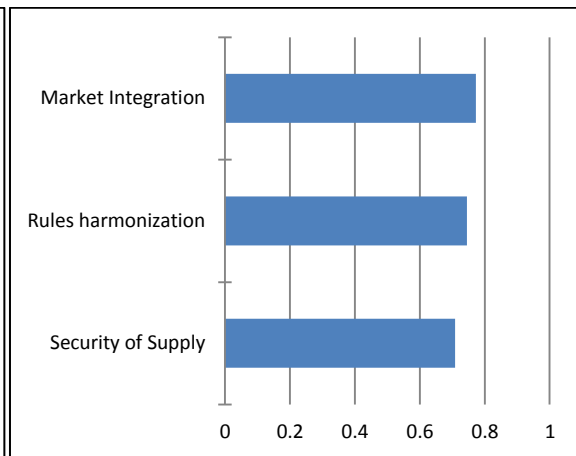


Figure 9 Drivers in EU-MENA Energy cooperation



Source: Cambini and Rubino (2016)

Finally, the survey evaluated the main driver of Euro-Mediterranean energy cooperation³⁹. The results (Figure 9) indicate that three possible drivers are considered almost equally important in the region. However, the slightly larger impact that market integration registered allows us to consider it as the main driver, suggesting that a technical process could promote convergence more effectively than a political process targeting full harmonisation (Tholens, 2014).

The main results illustrated in this section allow a greater understanding of the dynamic at play in north-south energy cooperation in the Mediterranean. The evidence collected evoke that, alongside political and institutional stakeholders, the energy industry is able to play a relevant role in shaping rule adoption, particularly in countries such as Egypt and Algeria, where this role is critically strong. These circumstances help to explain the limited progress and success in achieving a greater liberalisation of energy markets in SEMCs. These results reinforce our thesis that vertically integrated utilities, via their influence on their respective political constituency and institutional stakeholders, have mainly resisted EU energy rules on both side of the Mediterranean basin. It also provides a clear demonstration that energy sector reforms possess both economic and institutional dimensions (Glachant and Perez, 2007), that have to progress at the same pace and in a coordinated way. International standards are perceived as playing an increasing role in shaping rule adoption in the Euro-Mediterranean region. New actors, including China, in addition to EC and single MSs, are increasingly perceived as relevant in the Mediterranean region. Medreg, together with other energy networks, in the absence of a strong political mandate and a firm turn in favour of a liberalised gas market, still fails to play an effective role in terms of rule promotion. However, Medreg is perceived as prominent when promoting knowledge sharing and as a platform to disseminate know how.

³⁹ The question was: “On a scale from 0 to 5, how can you evaluate the following as driver of the EU - your country energy cooperation? Options available: Market Integration, Rules harmonization, Security of Supply.

5. Conclusion

The paper provides an analysis of the evolution of the gas sector in the EU-Mena region under differential EU pressure. Our study has evaluated two of the various possible dimensions that can be considered when examining energy systems transition (Sarrica et al., 2016): the techno-economic and societal dimensions. As often recalled in the literature (Kanellakis et al, 2013; Vihalemm and Keller, 2016; Westphal, 2014) the main resistance to EU role promotion was firstly internal. In particular, the EC-led market reform of the gas market had to fight a greater struggle to overcome internal resistance. We consider that part of these disagreements derives from the techno-economic characteristics of the gas sector, and its historical development in Europe. Gas is typically imported via long distance transport pipelines from locations often far away from the main demand hubs. Italy, Spain and Germany in particular developed relevant infrastructural investments with commercial partners overseas (mainly Algeria, Libya, Egypt and Russia) that required large sunk investments and a long term commitment with exporting countries. This was achieved developing strong commercial (and political) ties that member states developed with their partners, pivoting around risk sharing between supply and demand with long term agreements that maximise shared benefits and that include some form of weighted measure of those risks. The implications of these techno-economic characteristics were the development of public ownership and vertical integration, leaving limited or no role for competition⁴⁰. In the absence of a significant technological shift able to reduce fixed costs in the gas sector, as happened in the electricity sector⁴¹, and in a context of increased dependency on imported fuels, the resistance to the proposed pro-market reforms appears to have a stronger leverage with which to oppose the Commission's pressure. This is true in particular in those countries where these costs have been particularly significant and where import dependency is the highest⁴². Therefore, EC pressures for greater Internal Energy Market harmonisation, and its pressure on its Mediterranean neighbours for rule adoption outside EU borders, does not seem to follow the traditional core to periphery pathways. It has faced, rather, internal "glass" barriers, less visible but often as strong and resistant as formal opposition to the proposed paradigm transition. This scenario needs to be combined with a similar, if not stronger, presence of institutional and industrial stakeholder opposition against the transition in MENA countries. While some form or revision of the existing scaffolding of the gas industry in the SEMCs appears to be supportive to gradual opening-up of the domestic markets, the main results provided by our perception survey depict a situation of general inertia in the gas sector that is showing little sign of convergence toward the EU target model. The picture that emerges from our analysis is that several regional markets already exist and that each hub refers to the specific preferences and infrastructural endowment around which it was developed historically. In addition, also following Newbery (2001), it is still unclear whether the liberalisation of the gas market is actually able to deliver the expected results.

These characteristics seem to fit only partially with the Commission's preferences, and seem to suggest that a polycentric core-to-periphery design is steadily emerging, where domestic actors play a leading role in promoting rule adoption and institutional change. In this framework, vertically integrated utilities and national champions can exercise a significant veto power and are able to halt or slow down the process for the creation of an integrated regional market (both within and outside the EU). The aforementioned trends and dynamics represent features well known in the regulatory and

⁴⁰ As mentioned above, refer to section 3.1 and 3.2 above, some argue also that the market structure on the supply and demand side should be specular (power of the market argument).

⁴¹ The critical scale of generation plant decreased significantly with the advent of Combined Cycle Gas Turbine (CCGT) in the 1980s.

⁴² According to Heather (2015), "in the Mediterranean region only 30% of gas is sold at hub prices (virtually all of which is in Italy), leaving a large 64% still oil-indexed, spread across the remaining countries of Spain, Portugal, Greece and Turkey [...] In south east Europe regulated prices dominate at 52%, followed by oil indexation at 38% and almost no market priced gas (4% accounts for small quantities in Croatia); in this region there has been virtually no change in these proportions over the past ten years."

governance literature and can be reconciled with the effect of the so-called “European Regulatory Space”. The normative power concept suggesting that the Commission plays a positive and active role in shaping gas dynamics does not preclude the influence of member states as individual actors. Actually, our analysis helps to explain the heterogeneity of the instruments applied to the Euro-Mediterranean gas relationship. It is also useful to underline that the outcome of such huge undertaking will not necessarily be finalised in formal structures (as for the Energy Community). The constellation of power and interests in the region seems to be better accommodated through informal channels (such as Medreg), and with a more flexible format.

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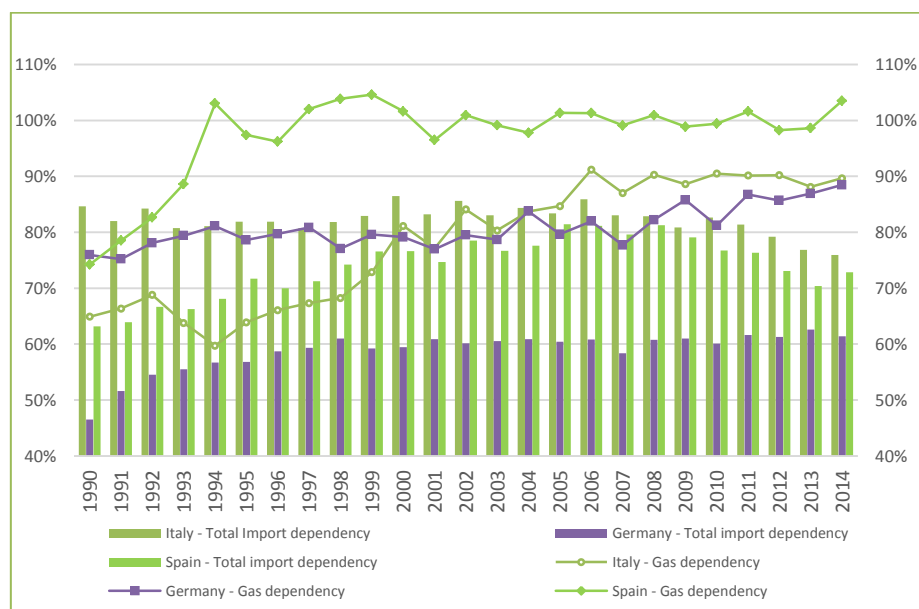
7. Appendix

Table 1 Perception of other international actors' role

	EU Memb ers	Fran ce	Germa ny	Ital y	Spa in	US A	Chi na	U N	WT O	IE A
Albania	0,8		1	1		1				0,8
Algeria	0,5	0,5	0,5	0,6	0,6	0,6	0,8	1		0,6
BiH	0,8	0,4	0,2	0,8	0,2	0,4	0,2	0,2	0,2	0,4
Croatia	0,9	0,8	0,8	0,7	0,5	0,1	0,2	0,4	0,3	0,3
Egypt	0,6	0,5	0,6	0,4	0,5	0,3	0,8	0,5	0,2	0,6
Israel	0,8	0,6	0,8	0,6	0,6	0,6	0,4			0,8
Jordan	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2
Libya	0,4	0,4	0,4	0,4	0,4		0,4	0,4	0,4	0,4
Montenegro	0,8	0,5	0,5	0,7	0,5	0,5	0,5	0,5	0,6	0,6
Palestinian Authority	0,6	0,4	0,2	0,4	0	0	0	0,6	0,2	0
Turkey	0,85	0,35	0,8	0,7	0,1	0,5	0,2	0,5	0,6	0,4
Average	0,66	0,47	0,55	0,5	0,3	0,4	0,37	0,4	0,3	0,4
				9	7	3		8	4	6

Source: Cambini and Rubino (2016)

Figure 10 Gas Dependency (DE, ES, IT)



Source: DG ENER, Unit A4, Energy datasheet, 2016

Table 2 – NG traded (pipeline)

Natural Gas: Trade movements 2014 by pipeline								
Billion cubic metres								
To	Netherlands	Norway	United Kingdom	Other Europe	Russian Federation	Algeria	Libya	Total imports
Germany	18,1	27,7	-	0,7	38,5	-	-	85,0
Italy	8,3	4,8	-	0,3	21,3	6,2	6,0	46,9
United Kingdom	6,6	25,9	-	0,4	-	-	-	32,9
France	4,9	15,5	-	-	7,0	-	-	27,4
Belgium	5,4	7,1	4,4	-	9,9	-	-	26,8
Netherlands	-	9,4	1,7	8,7	3,5	-	-	23,2
Other Europe	0,8	1,1	-	5,4	8,8	2,2	-	18,2
Spain	-	3,1	-	1,1	-	11,1	-	15,4
Poland	-	-	-	1,7	8,9	-	-	10,6
Austria	-	3,9	-	-	3,9	-	-	7,7
Czech Republic	-	2,6	-	-	4,7	-	-	7,3
Hungary	-	-	-	-	5,2	-	-	5,2
Ireland	-	-	4,5	-	-	-	-	4,5
Slovakia	-	-	-	-	4,3	-	-	4,3
Finland	-	-	-	-	3,1	-	-	3,1
Greece	-	-	-	0,6	1,7	-	-	2,3
Europe	44,1	101,1	10,6	18,8	120,8	19,5	6,0	361,9
Total exports	44,1	101,1	10,6	23,4	187,4	23,5	6,0	663,9

Source: BP Statistical Review of World Energy June 2015

Table 3 – NG traded (LNG)

Natural Gas: Trade movements 2014 as liquefied natural gas										
Billion cubic metres										
To	Trinidad & Tobago	Peru	Norway	Other Europe*	Oman	Qatar	Algeria	Equatorial Guinea	Nigeria	Total imports
Spain	2,0	1,2	1,2	0,2	0,2	3,0	4,9	-	2,7	15,5
United Kingdom	0,4	-	-	-	-	10,4	0,5	-	-	11,3
Turkey	0,1	-	0,3	0,2	-	1,1	4,1	-	1,5	7,3
France	0,1	0,1	0,2	0,1	-	1,0	4,4	0,1	1,2	7,1
Italy	0,1	-	-	0,1	-	4,3	0,1	-	-	4,5
Other Europe & Eurasia	0,5	-	1,0	0,2	-	0,9	0,6	-	0,4	3,5
Belgium	-	-	-	-	-	2,9	-	-	-	2,9
Europe and Eurasia	3,1	1,3	2,7	0,8	0,2	23,6	14,6	0,1	5,8	52,1

* Includes re-exports

Source: BP Statistical Review of World Energy June 2015

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