The European Union and the Good Governance of Energy Resources: Practicing What It Preaches?

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ABSTRACT

The good governance of energy resources and its role in the development of oil and gas producing countries is an area of growing interest in the global agenda. The European Union (EU), as an actor that has the double condition of being a major importer of oil and gas as well as a so-called "normative power", promotes the development of resource governance standards in the Global South. This article analyzes the role of the EU in improving the governance of energy resources, not only from an institutional perspective but also regarding the practical implications that such a normative approach has on European oil and gas import patterns. The paper explores whether EU's oil and gas imports have been affected by the policies of improving transparency and good resource governance in the oil and gas extractive sector, or if these policies have been ineffective in shaping their geographical origin. It tries to address empirically the link between the level of resource governance in oil and gas exporting countries and the EU's oil and gas geographical import pattern.

KEYWORDS

Energy resource governance; Good resource governance; Transparency; Energy imports

1. Introduction

Most oil and gas extraction takes place in the Global South, where accountability systems are usually either nonexistent or underdeveloped. Corruption and lack of transparency in oil and gas producers has been a longstanding concern for scholars and policymakers (Shaxson, 2007; Montinola and Jackman, 2002). Considerations such as the market risk management of energy resources (Harks, 2010) and the social and environmental impacts in extraction areas (UNEP, 2011; O'Rourke and Connolly, 2003), have extended such concerns to other issues. Global energy governance is related to the dual transition that characterizes global energy, replicating Nye's (1990) horizontal and vertical power shifts. There is a horizontal power shift toward new hydrocarbon technologies (i.e., fracking), renewable energy and the displacing of energy demand toward emerging countries. But there is also a vertical power shift from hard toward soft energy power based upon norms and ideational drivers (i.e., the good governance of energy resources, sustainability and fighting climate change or energy poverty), rather than material drivers like investment, technology, or raw resources (Escribano, 2015).

While global governance may be eroding in these issue areas, the European Union (EU) is upholding its principles where other major powers are stepping away or have never really bought into it. The EU's normative concerns regarding the governance of oil and gas extraction in the Global South is related with its aim of becoming a normative power through the setting of global standards also in this field (Manners, 2002). Nevertheless, European soft energy power has hard edges, and normative power too (Goldthau and Sitter, 2015). Competition among normative powers can turn into geopolitical struggles, like the Russian–European rivalry over Ukraine for its inclusion in the Eurasian Economic Union against signing an Association Agreement with the EU (Szulecki and Westphal, 2018). However, it can also lead to a normative race to the top, as happened with the provision of a transparency standard for the management of energy resources among the EU, the United States (US), and the Extractive Industries Transparency Initiative (EITI) (Escribano, 2017). Admittedly, momentum slowed when the Trump administration withdrew from the EITI and undermined the Dodd-Frank Act by repealing its Section 1504, requiring extractive companies the public reporting of payments to foreign governments. The EU, being both a major importer of oil and gas and a promoter of global norms, has nevertheless continue to show a strong preference toward developing resource governance standards.

This article analyzes the EU's role in improving the governance of energy resources, not only from an institutional perspective but also regarding its practical implications: whether the EU's oil and gas imports have been affected by the measures to improve transparency in the extractive sector, or if these measures have been ineffective in shaping their geographical import pattern. It is true that within the OECD it is not countries nor public companies that import, but rather private companies. However, there are channels to influence companies' behavior through public policy, motivating them to become pro-active in a particular field to gain reputation or prevent further onerous regulation (Eckert and Eberlein, 2020). First, because enacting disclosure legislation stipulating public reporting requirements and sanctions, including foreign but also nationally listed companies, directly influences companies' operations, at home and abroad. Secondly, institutional frameworks like EITI and/or benchmarks like the Resource Governance Index (RGI) signal to companies which countries come closer to higher transparency and/or governance standards.

There is evidence that EITI membership attracts foreign investment (Öge, 2016; Sovacool *et al*., 2016), potentially increasing oil and gas production and exports to the home countries of the investing companies. By measuring energy resources' governance through EITI membership and RGI scores, this research empirically addresses the link between the governance of oil and gas resources in exporting countries and the EU's oil and gas geographical import pattern. The article is structured as follows. Section 2 provides an overview of global energy governance and Good Resource Governance (GRG). Section 3 focuses on how the EU has approached GRG and to what extent it is consistent with the EU's oil and gas import pattern. Section 4 presents the empirical design of the research, while the results are discussed in section 5. The last section concludes.

2. Global energy governance and good resource governance

2.1. Definition and actors' preferences

The governance of extractive resources such as oil and gas "means different things to different people, depending on where they sit" (Carbonnier, 2011: 135). Florini and Sovacool (2009) define global energy governance as the international collective efforts to manage and distribute energy resources and provide energy services. Van de Graaf and Colgan (2016) distinguish two scopes of global energy governance: the potential scope — international social, economic, or political issues connected to the production, distribution, or consumption of energy — and the actual scope — the issues that focus the attention of energy actors—. The gaps between potential and actual scopes (table 1) are especially important for international security and domestic good governance.

Table 1. Global energy governance scopes and gaps

Potential scope Global energy governance goal	**Actual scope** Number of initiatives	**Gaps between potential and actual scope**
Security of energy supply and demand	6	Dispute resolution, especially for energy transit issues
Economic development	5	Energy poverty in developing countries
International security	1	Conflicts and arms purchase from petrodollars
Environmental sustainability	5	Developing meaningful responses to climate change
Domestic good governance	2	No real buy-in for principles of transparency, human rights

Source: Van de Graaf and Colgan (2016)

The focus here is on the gaps afflicting GRG in the energy sector: the effective, accountable, and transparent management of oil, gas, and mineral resources (Bauer and Quiroz, 2013). The origin of the concept dates back to the 1960's. Initial concerns about GRG were related to financial aspects of the sector, especially transparency of payments, revenues, and investments. The subject became a matter of public interest, especially in the 2000's, due to campaigns favoring company reporting, such as the 2001 Publish What You Pay (PWYP) slogan.

Presently, GRG attracts all the stakeholders of the oil and gas sector. Increasing transparency and accountability has implications spanning both market and non-market actors. Concerning market actors, resource allocation becomes more efficient when the asymmetry of information decreases (Healy and Palepu, 2001). For private companies, transparency usually entails higher stock prices (Dasgupta *et al.*, 2010), and accountability buttresses the trust between customers and companies (Swift, 2001). Totally or partial state-owned companies also gain, as they become more efficient and competitive (OECD, 2015). Regardless of whether the company is either public or private, the costs associated with corruption are high for any firm exposed to the market (Orudzheva *et al.*, 2017; Argandoña, 2005). GRG implications for non-market actors are equally important. Governments can have greater control over their energy resources and tax revenues (Bauer and Quiroz, 2013). GRG also complements the efforts of governments in designing, implementing, and supervising an institutional framework tackling corruption and fraud. In developing countries, transparency and accountability are cornerstones of economic, social, and political development (Bazilian *et al.*, 2014; Mudacumura, 2013).

2.2. Initiatives

Global energy governance has its own institutional landscape (Van de Graaf, 2013), encompassing international institutions such as the OECD, the IEA, and OPEC, among others. Most of them collaborate with institutions devoted specifically to GRG. At present, the EITI and the Natural Resource Governance Institute (NRGI) foster GRG around the world. National and regional governments have also made their own progress by enacting their own legislation.

The EITI was launched in 2004 as a United Kingdom (UK) initiative, being updated in 2013, 2016 and 2019. It is an example of state-led regime creation which evolved acquiring international relevance and eliciting the interest of governments, companies, and civil society around the world. The 2019 EITI Standard is a voluntary multilateral initiative that extends transparency requirements beyond revenue payments and introduces accountability regarding tax arrangements and other information on natural resources' management. The latest update increases the fiscal information disclosure demands in the contracts signed by states and companies. As this information used to be confidential, this new requirement is a great achievement. By the beginning of 2019, there were 52 countries implementing EITI, and more than 394 fiscal periods were covered by EITI reports disclosing US$2.5 trillion revenues (EITI, 2019). EITI includes supporting countries; oil, gas and mining companies; investment institutions; civil society organizations; and partner organizations, like international financial institutions, development agencies and banks, and industry associations.

EITI experienced adversity when the Trump administration radically changed the US position concerning global energy governance and GRG. Perceiving the EITI as a handicap for the competitiveness of US companies, in November 2017 the US decided to withdraw. Although the US was a key member, EITI has held together since its departure, as no other countries have followed that decision. By contrast, the EU has remained committed to EITI with a strong political and financial support, and more broadly through close cooperation with the G8 in order to promote global standards at the international level. Four EU Member States announced in 2013 their commitment to implement the EITI and a fifth one is working on a pilot project to test the Standard domestically. The EU has also supported EITI implementing countries through its adherence to the G8 “Fast-Track Partnership” initiative with countries interested in working on specific actions to increase the transparency in the extractives sector. While the EU has not made any direct financial contribution to the EITI Secretariat, it has contributed to the EITI Multi-Donor Trust Fund (MDTF), administered by the World Bank to provide grants and technical assistance to countries implementing the EITI principles. While the UK paved the way for the institutionalization of EITI and continue to be one of its main supporters, Brexit risks changing the country’s political influence and erode the EU’s leadership.

The NRGI is an organization devoted to the promotion of energy resources’ governance. It classifies countries according to their needs of improvement in resource governance. At present, NRGI has identified 12 priority countries and 9 limited engagement countries. The organization has also launched the Natural Resource Charter, a set of twelve precepts guiding governments and societies to maximize the economic opportunities offered to citizens by natural resources in producing countries (NRGI, 2014). The NRGI proposes the RGI, a measure of both energy and extractive resources' governance in exporter countries. The RGI is available for two years, 2013 and 2017, and its methodology is different for each year. The 2013 index has 50 indicators divided into four components: institutional and legal setting, reporting practices, safeguards and quality controls, and enabling environment. The 2017 index has four more indicators divided into three components: value realization, revenue management, and enabling environment.

Finally, while the EITI was taking shape, the US and the EU began to address energy resources' governance in a somewhat competing way. Although the EITI has been the initial seed, the US and the EU each followed their own paths to the good governance of energy resources. Though the interest of the US has greatly declined, it was not always this way. In 2009, the US Congress mandated the Security Exchange Commission (SEC) to issue an extractive resources' payment rule that was more ambitious than EITI. The rule was known as Section 1504, part of the Dodd–Frank Act financial overhaul legislation signed into law in 2010. Section 1504 required that all oil, gas, and mining companies listed on US stock exchanges engage in annual, public reporting of any payments over US$100,000 made to foreign governments. However, for some market actors, Section 1504 was seen as a threat to US companies competing in the global market (Fineberg, 2014). In 2017, with the Trump administration in office, the US House Financial Services Committee voted to proceed with a bill (H.R. 4519) repealing Section 1504. At the end of that year, the US Government decided to withdraw from the EITI.

The long-term implications of the US renouncing to exert its soft power in the governance of energy resources is uncertain, with some authors considering that the initial diffusion of US disclosure rules has mitigated the effects of its withdrawal (Kleizen, 2018). Whether the EU could fill this gap in a consistent manner is the subject of the remainder of this article.

3. Good resource governance in the European Union

According to Eurostat (European Union, 2019), in 2017 the EU imported 55% of all the energy it consumed. Energy imports in the EU makes up more than 20% of total EU imports (Eurostat, 2020). Thus, energy imports are a key driver for the EU to promote good oil and gas governance in European suppliers. Surprisingly, the good governance of energy resources is articulated weakly within the EU's energy policy. None of its backbone documents contain any explicit reference to the issue, and the same happens with the bilateral agreements that complete its external dimension. The more recent EU initiatives on climate and energy policy, the Energy Union (European Commission, 2015) and the European Green Deal (European Commission, 2019) also lack any explicit reference to GRG.

The complexity of European energy policy means that an unstable balance must be maintained between integration and contestation (Herranz-Surrallés *et al.*, 2020), which helps to understand why GRG is not explicitly mentioned. However, while there are not direct references to GRG, the different dimensions of the Energy Union enhance transparency through monitoring and reporting (Oberthür, 2019). In fact, its inclusion in the transparency and accounting directives (Directives 2013/34/EU and 2013/50/EU) make it a "hard governance" domain, which contrast with the soft or 'harder forms of soft governance' that characterises the Energy Union (Ringel and Knodt, 2018: 219). Overall, the EU seeks to influence global resource governance according to its normative paradigm (Goldthau and Sitter, 2019), and its inclusion in the transparency and accounting directives reinforced the EU's preferences towards GRG.

GRG is a relatively novel issue in European energy governance that emerged when the European Commission was confronted with the pressure to follow US regulations (Escribano, 2017). In October 2011, it issued two proposals to amend the EU's transparency and accounting Directives. In 2013, the EU enacted legislation that requires extractive companies to disclose payments over €100,000 to governments on a country-by-country and project-by-project basis. Like the US Section 1504 provisions, the revised Directives stipulate annual reporting, sanctions for non-compliance, and applicability to non-European companies. In the EU, the regulations would cover almost 3,000 companies, the majority of which, including Russian Gazprom, are listed in Germany and the UK; however, they extend also to the large number of non-listed companies active on EU markets. Member States can impose sanctions dependent on national laws, from "naming and shaming" to fines.

The EU enacted a more stringent regulation, encompassing more companies and sectors than the already repealed US Section 1504 (Barnier, 2014). Whenever the issue is about forging a global standard, the EU seems to experience the selfrealization of its normative power aspirations. All this suggests that the EU wants to provide the reference global standard for transparency in the extractive sector, exerting normative leadership in a field where it used to be a follower at risk of being displaced by the US. With the US now out of the race to the top , the EU seems to have a free path to forge such a standard. The tendency toward higher standards of transparency is spreading among civil societies in poorly governed resource-rich countries. Such a soft power, vertical ideational shift in Nye's terms, also responds to Western civil society demands, which used the idea of "transparency as governance" (Haufler, 2010) as a focal point to facilitate coordination and achieve institutionalization.

More importantly, the EU's normative push also targets populations' preferences in energy-rich developing countries: profiting from their energy resources and using them to attain higher levels of economic development while reducing their propensity for authoritarianism and conflict, as highlighted by the resource curse literature.[1] The diffusion of EU norms regarding GRG has been contested from China (arguing that economic development precedes it), natural resource-rich countries (which see it as an extra-territorial intrusion), and Western extractive industries (on the grounds of creating an uneven playing field). However, these contestations have not affected EU's norms legitimacy, nor have they challenged the principle of transparency (Vlaskamp, 2020). This is the kind of shift from material (oil and gas reserves and production) to ideational (norms regulating its extraction) capabilities that illustrates

[1] A review of the lengthy literature on the resource curse is out of the scope of this article, for a recent 'survey of surveys' see Badeeb *et al.* (2017).

the vertical transition from hard to soft energy power and the role of the EU supplying GRG norms as global energy public goods.

Assuming that the EU is fostering transparency as a normative standard in the extractive sector, we state this hypothesis:

Hypothesis 1: The quantity of oil and gas imported by EU countries is positively related to the transparency in energy resources' management in exporting countries.

Transparency is a necessary but not sufficient condition for GRG, because it does not necessarily mean that the information published is understandable or useful for stakeholders (Laud and Schepers, 2009). A genuine accountability devoted to stakeholders in the extractive sector demands more than just disclosing information (Desai and Jarvis, 2012). Transparency concerns only revenues, not expenses, and it has been only partially useful in improving the wellbeing of oil- and gas-rich countries' citizens (Frynas, 2010; Kolstad and Wiig, 2009; Mejia-Acosta, 2013). EITI has been labeled as "cheap foreign policy", a low-cost recipe by default for an otherwise intractable problem (Haufler, 2010: 58), lacking stringent standards and enforcement to offer only moderate club benefits like social branding (Schuler, 2012). It has been further argued that EITI implementation attracts additional aid, leading to the apparent paradox of most corrupt countries joining EITI, in spite of reducing corruption in a cumulative manner (David-Barrett and Okamura, 2013).

To achieve a genuine accountability for stakeholders, GRG in the EU should go beyond transparency. Although explicit mentions of GRG are absent in European external energy policy, the accounting measures mentioned in the previous section pursue this goal. There is no articulated policy concerning GRG, which is covered rather through different policies and initiatives. GRG could be considered a non-market externality aligned with the goals of European energy security policy, insofar as long-term energy security is linked to environmental and socio-economic sustainability (Nawaz and Alvi, 2018). Because GRG is aligned with both the normative power of the EU and its energy policy goals, we propose a second hypothesis:

Hypothesis 2: The quantity of oil and gas imported by EU countries is positively related not only with transparency but also with good energy resource governance (GRG) in exporting countries.

The following sections analyze both hypotheses to check the coherence between enacted EU norms and the actual behavior of EU members, which reveals their real preferences regarding the good governance of oil and gas resources in producing countries.

4. Empirical design

The empirical design of this research is innovative, because the unit of analysis is not a specific country but the coupled exporter–importer countries (excon–imcon). The sample includes more than 70 oil and/or gas exporter countries, and 28 EU importing countries (including the UK). Thus, the sample comprises more than 300 trade flows, each with one or more observations for the period 2007–2016. The empirical design has two dependent variables: quantity of imported oil (thousand tons) and quantity of imported gas (thousand tons of oil equivalent). We analyze each resource separately, because each has its own economic implications (Batten *et al.*, 2017). The source of these two variables is Eurostat. The independent variables are divided into five groups, as described in table 2:

- Energy supply variables: oil and gas production and consumption of the exporting countries and their GDPpc.
- Energy demand variables: oil and gas production and consumption, plus GDPpc of EU energy-importing countries.
- Market variables: spot price of oil ($ per Brent barrel) or gas ($ per million Btu) and distance between exporter and importer.
- Geopolitical variables: Herfindahl–Hirschman Index (HHI) of EU Member States' oil or gas imports and political risk of the exporting country.
- Resource governance indicators: EITI membership and the RGI are the measures of GRG used to test the hypothesis. EITI membership is the measure of transparency to test the first hypothesis, and the RGI measures GRG in the second hypothesis.

Table 2 shows the source of the independent variables. Each variable has annual values for the period 2007-2016, except the RGI which has data only for 2013 and 2017 (NRGI, 2017, 2013). Therefore, we use RGI 2013 values for years 2012-2015 and RGI 2017 values for 2016.

Table 2. Description of independent variables

Group	Variable	Description	Measure	Source
Supply	*prodex*[1]	Primary production of the resource in the excon	Thousand tonnes of oil equivalent (TOE)	Eurostat
	consex[1]	Gross inland consumption of the resource in the excon	Thousand tonnes of oil equivalent (TOE)	Eurostat
	GDPpcex	GDP (current US$) pc of the excon	US$ per inhabitant	World Bank
Demand	*prodim*[1]	Primary production of the resource in the imcon	Thousand tonnes of oil equivalent (TOE)	Eurostat
	consim[1]	Gross inland consumption of the resource in the imcon	Thousand tonnes of oil equivalent (TOE)	Eurostat
	GDPpcim	GDP (current US$) pc of the imcon	US$ per inhabitant	World Bank
Market	*price*[1]	Market price of the resource	US$	BP statistical review of world energy
	distance	Distance between the most populated cities of the excon and the imcon	Kilometers	Centre d'Etudes Prospectives et d'Informations Internationales (CEPII)
Geopolitical	*HHI*[1]	Herfindahl–Hirschman index (HHI). A measure of imports diversification of the resource of the imcon	HHI ranges from 0 (free market) to 10000 (monopoly)	Own elaboration
	polriskpex	Political risk of the excon	Higher values indicate greater political stability	World Bank
Resources governance	*RGI*[2]	Measure of the resource governance of the excon	A categorical measure ranging from 1 (failing governance) to 5 (good governance)	Natural Resource Governance Institute (NRGI)
	EITI	Measure of the transparency in resource extraction of the excon	• 0 if the country is not listed • 1 if the country is candidate • 2 if the country is compliant	Extractive Industries Transparency Initiative (EITI)

Source: own elaboration. (1) Independent variable referring to a distinct resource (oil or gas) depending on the model (oil models and gas models).

We use a log-linear panel data model with clustered standard errors (clustered by *imcon*), estimating both static and dynamic models. To address endogeneity concerns, we identify up to four potential endogenous variables: *consim*, *GDPpcim*, *price*, and *HHI*. Oil and gas imports are related to the GDPpcim and price (Newell and Prest, 2017; Powers, 2007). The consumption of oil and gas of importer countries is also expected to be associated with energy imports, since, the more the consumption, the more the demand for resources. Additionally, the more diversified the imports, the lower the imports of each country. Thus, *HHI* could be also regarded as an endogenous independent variable.

Three different models are estimated for each dependent variable: a base model including all the independent variables excepting resource governance variables (a), a model including all the independent variables and the *EITI* variable (b), and a model including all the independent variables and the *RGI* variable (c). Equation (1) shows the mathematical expression of the static models, where β_{11} is not included in the base model (a). In (b) models the variable associated with this parameter is EITI, and, in (c) models, the variable associated is RGI. The software used for estimation is Stata 15.

$$\begin{aligned} lnimports_{i,t} = {} & \alpha + \beta_1 lnprodex_{i,t} + \beta_2 lnconsex_{i,t} + \beta_3 lngdppcex_{i,t} + \beta_4 lnprodim_{i,t} \\ & + \beta_5 lnconsim_{i,t} + \beta_6 lngdppcim_{i,t} + \beta_7 lnprice_{i,t} + \beta_8 lndist_{i,t} + \beta_9 lnHHI_{i,t} \\ & + \beta_9 lndist_{i,t} + \beta_{10} polriskex_{i,t} + \beta_{11} resgov_{i,t} + \varepsilon_{i,t} \end{aligned}$$

(Eq. 1)

5. Results

5.1. Descriptive statistics and correlations

Descriptive statistics of both dependent and independent variables are available in table 3, and table 4 shows the correlation matrix of the variables. Two factors reduce the sample size in some models: first, as gas is harder to diversify than is oil, and also because there are fewer exporting countries, the number of observations for gas is smaller than for oil; second, RGI scores are available for only a limited number of countries.

Table 3. Descriptive statistics of the variables

Resource	Group	Variable	Obs.	Mean	Std. Dev.	Min.	Max.
Oil	Dependent	*imports*	4670	1181	3190	0	36048
	Supply	*prodex*	4391	113.49	148.68	0.01	596.39
		consex	4580	50.31	115.00	0.29	890.18
		GDPpcex	4428	19737	21965	280.12	102910
	Demand	*prodim*	4670	7.06	17.22	0	79.87
		consim	4670	38.18	31.40	2.47	109.64
		GDPpcim	4670	35838	14468	5932	64322
	Market	*price*	4670	83.75	24.06	43.73	111.67
		distance	4670	3722	2690	59.62	15608
	Geopolitical	*HHI*	4670	3206	2615	764.63	10000
		polriskex	4670	-0.34	1.03	-2.97	1.53
	Resource governance	*RGI*	1453	3.10	1.22	1	5
		EITI	4670	0.30	0.64	0	2
Gas	Dependent	*imports*	1640	2160	5137	0	52803
	Supply	*prodex*	1536	118.01	182.38	0.01	636.49
		consex	1616	83.16	141.12	0.25	645.45
		GDPpcex	1630	32114	28069	830.41	102910
	Demand	*prodim*	1640	7.48	15.62	0.00	64.89
		consim	1640	25.20	24.37	0.39	84.84
		GDPpcim	1640	33359	18861	5932.90	119172
	Market price	*price*	1640	8.91	1.99	4.93	11.60
		distance	1640	2559	2604	117.35	17011.27
	Geopolitical	*HHI*	1640	4667	2472.63	0	10000
		polriskex	1640	0.04	1.03	-2.79	1.36
	Resource governance	*RGI*	428	N.A.	N.A.	1	5
		EITI	1640	N.A.	N.A.	0	2

Source: own elaboration. N.A.: not applicable

Table 4. Correlation matrix of the variables

Oil	*lnimports*	*lnprodex*	*lnconsex*	*lnGDPpcex*	*lnprodim*	*lnconsim*	*lnGDPpcim*	*lnprice*	*lndistance*	*lnHHI*	*polriskpex*	*RGI*
lnprodex	0.364											
lnconsex	0.160	0.615										
lnGCPpcex	-0.035	0.053	0.308									
lnprodim	-0.012	-0.155	-0.044	0.016								
lnconsim	0.212	-0.121	-0.075	0.043	0.478							
lnGDPpcim	0.164	-0.032	-0.025	0.115	0.241	0.517						
lnprice	-0.023	0.008	-0.002	0.090	0.001	-0.002	0.080					
lndistance	0.008	0.405	0.002	-0.328	0.056	0.191	0.139	0.000				
lndistance	-0.274	0.000	0.040	0.010	0.074	-0.616	-0.485	0.019	-0.242			
polriskex	-0.121	-0.221	-0.074	0.739	0.060	0.095	0.124	0.025	-0.295	0.001		
RGI	0.056	0.263	0.322	0.561	0.016	0.023	0.113	0.055	-0.051	0.020	0.524	
EITI	0.150	0.126	-0.163	-0.142	-0.055	-0.104	-0.067	-0.022	0.113	0.057	-0.118	0.281

Gas	*lnimports*	*lnprodex*	*lnconsex*	*lnGDPpcex*	*lnprodim*	*lnconsim*	*lnGDPpcim*	*lnprice*	*lndistance*	*lnHHI*	*polriskpex*	*RGI*
lnprodex	0.364											
lnconsex	0.163	0.438										
lnGDPpccex	0.114	-0.074	0.001									
lnprodim	0.089	0.019	-0.017	0.000								
lnconsim	0.151	-0.045	-0.107	-0.007	0.437							
lnGDPpcim	0.181	0.027	-0.053	0.105	0.106	0.313						
lnprice	0.019	0.012	-0.005	0.057	0.029	0.009	0.093					
lndistance	-0.198	0.302	-0.110	-0.341	0.019	0.233	-0.001	0.000				
lndistance	0.033	0.045	0.068	-0.051	-0.018	-0.285	-0.378	-0.010	-0.049			
polriskex	-0.012	-0.217	-0.215	0.874	0.044	-0.003	-0.017	0.038	-0.351	-0.021		
RGI	0.168	0.243	0.175	0.613	0.051	0.017	0.224	0.091	-0.269	-0.077	0.545	
EITI	0.044	0.114	-0.166	0.009	0.007	0.072	0.111	-0.076	0.264	-0.070	-0.031	0.582

5.2. Static models

Static fixed effects models do not allow estimation of coefficients for time-invariant independent variables such as distance. To get coefficients for these variables, we compute static random effect models using two different estimators: the feasible generalized least squares (FGSL) estimator and the Hausman–Taylor estimator for error-components' models (Hausman and Taylor, 1981). The models that include this last estimator need to specify the endogenous variables, which are *GDPpcim* and *HHI* for oil models and *HHI* for gas models.[2] A total of 12 static models are estimated: six for oil (three with the random effects estimator and three with the Hausman–Taylor estimator, following the (a) (b) (c) models described in the former section) and six for gas (three with the random effects estimator and three with the Hausman–Taylor estimator).

5.2.1. Oil static models

Columns 1–6 in table 5 provide information about the results of oil static models. Two coefficients of the supply independent variables are consistently significant across models: production and consumption of oil of the exporter country (*lnprodex* and *lnconsex*). The *price* coefficients are all significant and negative, evidencing the effect of prices over oil imports. All the coefficients of the geopolitical variables are significant. This result demonstrates the importance of geopolitical concerns in the oil market.

[2] The endogeneity of the four potential endogenous regressors is tested with the Robust Durbin–Wu–Hausman test of endogeneity implemented with the Stata ivreg2 command (Baum *et al*., 2007)

Table 5. Static models' estimation results [2]

	Oil						Gas					
	1 (a) **coef** **(se)**	**2 (b)** **coef** **(se)**	**3 (c)** **coef** **(se)**	**4(a)** **coef** **(se)**	**5 (b)** **coef** **(se)**	**6 (c)** **coef** **(se)**	**7 (a)** **coef** **(se)**	**8 (b)** **coef** **(se)**	**9 (c)** **coef** **(se)**	**10 (a)** **coef** **(se)**	**11 (b)** **coef** **(se)**	**12 (c)** **coef** **(se)**
lnprodex	1.293***	1.275***	1.310***	1.534***	1.536***	1.381***	1.137***	1.115***	2.124***	1.326***	1.291***	2.922***
	(0.084)	(0.084)	(0.196)	(0.126)	(0.126)	(0.254)	(0.125)	(0.125)	(0.452)	(0.199)	(0.198)	(0.549)
lnconsex	-0.503***	-0.460***	-0.574***	-0.447***	-0.433***	-0.655***	-0.291	-0.256	-1.278***	-0.409	-0.370	-2.780***
	(0.115)	(0.115)	(0.180)	(0.159)	(0.158)	(0.245)	(0.186)	(0.189)	(0.405)	(0.356)	(0.352)	(0.873)
lnGDPpcex	0.041	-0.034	0.023	0.417***	0.337**	0.409	-0.377	-0.456*	0.585	-1.009***	-1.102***	-0.378
	(0.129)	(0.127)	(0.297)	(0.143)	(0.147)	(0.302)	(0.264)	(0.270)	(0.606)	(0.242)	(0.247)	(0.549)
lnprodim	0.234**	0.222**	0.005	0.303*	0.300*	-0.011	-0.341*	-0.325*	-0.142	-0.903***	-0.842***	-0.273
	(0.111)	(0.110)	(0.173)	(0.174)	(0.173)	(0.258)	(0.184)	(0.184)	(0.240)	(0.295)	(0.294)	(0.573)
lnconsim	0.347**	0.411***	0.583***	0.078	0.151	-0.379	1.001***	1.009***	1.173***	0.455	0.538	2.784**
	(0.160)	(0.158)	(0.213)	(0.272)	(0.273)	(0.406)	(0.227)	(0.226)	(0.304)	(0.504)	(0.498)	(1.175)
lnGDPpcim	0.067	0.085	0.469	-0.170	-0.188	3.956***	0.073	0.101	0.750	-1.462***	-1.356**	0.579
	(0.224)	(0.222)	(0.290)	(0.435)	(0.434)	(0.959)	(0.407)	(0.400)	(0.562)	(0.559)	(0.557)	(1.151)
lnprice	-0.236**	-0.204*	-0.648***	-0.324***	-0.290***	-1.210***	0.232	0.304	-0.364	0.789***	0.833***	-0.097
	(0.115)	(0.115)	(0.191)	(0.110)	(0.111)	(0.180)	(0.224)	(0.222)	(0.414)	(0.224)	(0.225)	(0.316)
lndist	-1.458***	-1.490***	-1.653***	-1.410***	-1.468***	-1.659***	-1.637***	-1.692***	-1.635***	-1.796***	-1.870***	-2.631
	(0.141)	(0.141)	(0.195)	(0.270)	(0.270)	(0.381)	(0.229)	(0.232)	(0.425)	(0.555)	(0.546)	(1.644)
lnHHI	-1.389***	-1.355***	-1.347***	-1.376***	-1.357***	-1.643***	0.535***	0.529***	0.850***	0.543***	0.538***	0.883***
	(0.170)	(0.170)	(0.249)	(0.152)	(0.152)	(0.257)	(0.139)	(0.144)	(0.080)	(0.066)	(0.066)	(0.083)
polriskex	-0.293**	-0.260**	-0.728***	-0.231**	-0.224**	-1.002***	0.277	0.307	-1.384*	0.478**	0.472**	-1.293**
	(0.127)	(0.129)	(0.278)	(0.098)	(0.098)	(0.266)	(0.295)	(0.298)	(0.729)	(0.200)	(0.200)	(0.592)
EITI		0.272***			0.153**			0.300*			0.236*	
		(0.091)			(0.073)			(0.176)			(0.125)	
RGI			0.034			-0.139			0.303			0.620
			(0.145)			(0.167)			(0.265)			(0.424)
Cons	21.232***	21.256***	19.747***	19.939***	20.685***	-11.752	8.060*	8.633*	-12.337	32.406***	32.227***	1.304
	(3.192)	(3.161)	(4.731)	(4.502)	(4.505)	(9.126)	(4.721)	(4.781)	(7.583)	(7.333)	(7.261)	(17.694)
N	4426	4426	1382	4426	4426	1382	1630	1630	426	1630	1630	426
r2	0,31	0,33	0,33				0,30	0,30	0,39			

*** p<0.01, ** p<0.05, and * p<0.1

[2] Models (1)–(3) and (7)–(9) use the FGSL estimator (xtreg, re), and the other models use the Hausman–Taylor estimator (xthtaylor)

For the quantity of imported oil, the effect of the *EITI* is positive and significant (in model 2 *b*= 0.272, $p<0.01$; in model 5 *b*= 0.153, $p<0.05$). However, *RGI* has no effect on the quantity of imported oil.

5.2.2. Gas static models

Columns 7–12 in table 5 provide information about the results for gas in static models. The only supply variable that is significant across models is the gas production of the exporter country (lnprodex), with a positive sign. As with oil models, geopolitical variables play a key role in gas models. However, the sign of *HHI* coefficients is different from the oil models, pointing to the particularities of the gas trade.

The effects of the resource governance variables are in line with those of the oil models. The *EITI* coefficients are significant and positive (in model 8 *b*= 0.300, $p<0.1$; in model 11 *b*= 0.236, $p<0.1$), whereas those related to RGI are not.

5.3. Dynamic models

Dynamic models, where the independent variable depends also on its own values in previous periods, are more complicated than are static models and address potential autocorrelation, heteroscedasticity, and endogeneity problems. Some of the independent variables considered might be related to the dependent variables and, hence, be endogenous. We use the Arellano–Bond system generalized method of moments (GMM) estimator (Arellano and Bover, 1995; Arellano and Bond, 1991; Blundell and Bond, 1998) for the dynamic models. The estimator addresses potential endogeneity, autocorrelation, and heteroscedasticity problems. However, in some models, the unobserved panel-level effects might be correlated with the lags of the dependent variable (autocorrelation), which makes the estimations inconsistent. Additionally, we use the dynamic panel data estimator to address this issue. A total of 12 dynamic models are estimated: six for oil (three with the Arellano–Bond estimator and three with the dynamic panel data estimator) and six for gas (three with the Arellano–Bond estimator and three with the dynamic panel data estimator).

5.3.1. Oil dynamic models

Columns 13–18 in table 6 provide information about the results of the oil dynamic models. The lagged coefficient of the dependent variable (*L.lnmton*) is significant in all the models, pointing to the strong effect of the imports of a past year in the next one. The most important independent variables in these models are price (*lnprice*) and imports' diversification (*lnHHI*). Neither of the resource governance variables is significant in any model.

5.3.2. Gas dynamic models

Columns 19–24 in table 6 reports the results for gas dynamic models. As for oil dynamic models, the most prominent variable is the lagged coefficient of the dependent variable (*L.lnmtoe*). The coefficients of other independent variables are seldom significant, and those related to resource governance variables are not significant at all. The results of models 22 to 24 should be interpreted with caution, because the number of instruments is greater than is the number of groups.

Table 6. Dynamic models' estimation results [3]

	Oil						Gas					
	13 (a) coef (se)	**14 (b) coef (se)**	**15 (c) coef (se)**	**16 (a) coef (se)**	**17 (b) coef (se)**	**18 (c) coef (se)**	**19 (a) coef (se)**	**20 (b) coef (se)**	**21 (c) coef (se)**	**22 (a) coef (se)**	**23 (b) coef (se)**	**24 (c) coef (se)**
L.lnmton	0.305***	0.304***	0.193**	0.254***	0.255***	0.157**	0.551***	0.550***	0.369***	0.376***	0.377***	0.180**
	(0.041)	(0.041)	(0.089)	(0.060)	(0.060)	(0.077)	(0.057)	(0.059)	(0.116)	(0.052)	(0.047)	(0.085)
lnprodex	1.378***	1.352***	-0.902	1.093**	1.201**	0.356	0.405	0.399	-1.456	2.760***	2.743***	1.660
	(0.522)	(0.523)	(1.271)	(0.493)	(0.505)	(0.694)	(0.450)	(0.470)	(2.441)	(0.663)	(0.553)	(1.471)
lnconsex	-1.021*	-1.036*	0.679	-0.727	-0.692	-1.033	-0.330	-0.322	3.997	-3.442***	-3.413***	-2.848
	(0.612)	(0.612)	(1.554)	(0.605)	(0.605)	(0.738)	(1.075)	(1.067)	(5.104)	(1.213)	(1.127)	(2.579)
lnGDPpcex	1.223***	1.286**	4.501***	0.115	-0.014	0.849	-0.139	-0.153	1.334	-0.514	-0.512	0.836
	(0.432)	(0.506)	(1.234)	(0.361)	(0.379)	(0.732)	(0.467)	(0.606)	(1.644)	(0.454)	(0.468)	(1.124)
lnprodim	0.211	0.217	0.203	0.925*	0.952*	0.241	0.480	0.481	0.138	-1.569**	-1.568**	-1.992**
	(0.177)	(0.178)	(0.517)	(0.552)	(0.556)	(0.878)	(0.440)	(0.445)	(1.740)	(0.739)	(0.775)	(0.823)
lnconsim	0.173	0.136	-0.442	0.571	0.598	3.355	-0.364	-0.367	0.618	-1.037	-0.986	12.533***
	(0.320)	(0.344)	(0.694)	(1.048)	(1.053)	(2.294)	(0.559)	(0.557)	(2.163)	(1.556)	(1.536)	(4.211)
lnGDPpcim	0.227	0.233	0.314	1.695***	1.683***	4.280***	0.417	0.422	0.471	-1.516*	-1.516*	1.269
	(0.358)	(0.361)	(0.751)	(0.625)	(0.629)	(1.217)	(0.845)	(0.850)	(2.622)	(0.884)	(0.852)	(2.007)
lnprice	-0.588***	-0.611***	-1.923***	-0.424**	-0.373**	-1.238***	0.013	0.017	-0.640	0.216	0.221	-1.039*
	(0.175)	(0.202)	(0.449)	(0.173)	(0.179)	(0.297)	(0.283)	(0.323)	(0.681)	(0.290)	(0.264)	(0.605)
lndist	-0.355	-0.319	1.372	-1.167	-0.999	-3.916**	0.328	0.337	0.041	2.591*	2.548*	-10.788**
	(0.855)	(0.859)	(1.893)	(0.960)	(0.970)	(1.894)	(0.876)	(0.842)	(2.189)	(1.545)	(1.313)	(4.506)
lnHHI	-0.805***	-0.807***	-1.285***	-1.058***	-1.054***	-1.641***	0.150	0.150	0.497	0.357	0.356***	0.856***
	(0.239)	(0.239)	(0.489)	(0.242)	(0.244)	(0.364)	(0.154)	(0.154)	(0.348)	(0.226)	(0.099)	(0.096)
polriskex	-1.097**	-1.180**	-2.684**	0.005	-0.039	-0.339	-0.186	-0.170	0.082	0.066	0.065	-1.543
	(0.445)	(0.531)	(1.054)	(0.229)	(0.234)	(0.403)	(0.659)	(0.751)	(2.048)	(0.375)	(0.360)	(1.210)
EITI		-0.113			0.156			0.015			0.045	
		(0.399)			(0.134)			(0.460)			(0.196)	
RGI			-0.305			-0.266			0.968			0.910
			(0.732)			(0.253)			(1.448)			(0.597)
Cons	-2.637	-3.181	-31.566				-3.945	-3.945	-34.011			
	(6.695)	(7.101)	(19.378)				(13.668)	(13.677)	(37.793)			
n	3960	3960	1382	3958	3953	1382	1466	1466	426	1466	1466	426
number of inst.	133	133	94	271	271	169	89	89	63	281	281	137
number of groups	456	456	330	456	456	330	164	164	102	164	164	164
Ar(1) test	0	0	0				0	0	0			
Ar(2) test	0,13	0,13	0,07				0,23	0,23	0,78			
Hansen test	0,01	0,01	0,17				0,04	0,04	0,09			
Diff-in-Hansen test	0,02	0,03	0,40				0,23	0,19	0,60			

*** p<0.01, ** p<0.05, and * p<0.1

[3] Models (13)-(15) and (19)–(21) use the Arellano–Bond estimator (Stata xtabond2 command), and the other models use the dynamic panel data estimator (xtdpd). The label of the lagged coefficient of the dependent variable would be L.lnmtoe for gas models. Coefficients of the lags of the variables in the dynamic panel data estimator models are not displayed. P-values provided for Ar(1) test, Ar(2) test, Hansen test, and Diff-in-Hansen test.

5.4. Discussion

Table 7 summarizes the outputs of the estimations of tables 5 and 6, comparing the results of oil and gas models. The columns “%” indicate the percentage of models where the coefficients of the independent variables have been significant. The values range from 100% (the coefficients have been significant in all six models)[3] to 0% (the coefficients have not been significant in any model). The columns “sign” points to the sign of the coefficients. Finally, the column “Different sign oil–gas” shows if the sign is different from oil to gas models.

Table 7. Summary of the results

		Oil				Gas				
		Static		Dynamic		Static		Dynamic		
		%	Sign	%	Sign	%	Sign	%	Sign	Different sign oil–gas
Dependent	*L.lnmton*			100%	+			100%	+	No
Supply	*lnprodex*	100%	+	67%	+	100%	+	33%	+	No
	lnconsex	100%	-	33%	-	33%	-	33%	-	No
	lnGDPpcex	33%	+	50%	+	50%	-	0%		Yes
Demand	*lnprodim*	67%	+	33%	+	67%	-	50%	-	Yes
	lnconsim	50%	+	0%		67%	+	17%	+	No
	lnGDPpcim	17%	+	50%	+	33%	-	33%	-	Yes
Market	*lnprice*	100%	-	100%	-	33%	+	17%	-	Yes
	lndist	100%	-	17%	-	83%	-	50%	+/-	No/Yes
Geopolitical	*lnHHI*	100%	-	100%	-	100%	+	33%	+	Yes
	polriskex	100%	-	50%	-	67%	+/-	0%		No/Yes
Resource governance	*EITI*	100%	+	0%		100%	+	0%		No
	RGI	0%		0%		0%		0%		No

Source: own elaboration.

[3] Three static models (a, b, c) are estimated with random effects and three more are estimated with the Hausman–Taylor estimator; moreover three dynamic models are estimated with the Arellano–Bond estimator and three more are estimated with the dynamic panel data estimator.

The group of market and geopolitical variables has the most prominent results. They are significant in most of the models, especially in oil ones, but in some cases the sign of the coefficients changes from oil to gas. This difference is more evident for diversification of imports (*lnHHI*) and *price*, which coefficients are negative in oil models but positive in gas ones. These results might be due to gas being harder to diversify than oil because of a higher share of fixed physical infrastructures (gas pipelines) and long-term “take or pay” contracts signed to trade gas (Zhang and Ji, 2018).

Regarding resource governance, the EITI has significant and positive coefficients in static models, both for oil and gas, showing that EU countries are importing more oil and gas from countries that have signed the EITI. The dynamic models did not confirm these results, although the lag of the dependent variable might be weakening the effects of the rest of the variables, including the EITI variable (Keele and Kelly, 2006; Achen, 2000), and do not invalidate the outcomes of the static models.

Thus, this article finds some evidence supporting hypothesis 1 concerning transparency, but not for hypothesis 2 about GRG. This result does not necessarily indicate that the EU pays minor or partial attention to GRG relative to transparency. It can also show either a preference for European-promoted institutional initiatives such as the EITI or just a lack of operationality in using the RGI as a tool to guide policy. In any case, EITI requirements focus on transparency, whereas GRG goes well beyond. Therefore, it could be said that, regarding energy, the EU is fostering governance as transparency

Critics of transparency suggest either that transparency might not be enough to tackle corruption (Lindstedt and Naurin, 2010) or that it is influenced heavily by major stakeholders, such as institutions, lobbies, and companies, rather than local stakeholders (Ofori and Lujala, 2015). The 2019 update of the EITI standard demands comprehensive and reliable disclosures by reporting entities, but relevant aspects of GRG, such as revenue management and an enabling environment, cannot be addressed just with transparency. More stringent voluntary standards, or even compulsory norms, seem to be needed to effectively foster GRG from the demand side.

6. Conclusion and policy implications

The EU has promoted voluntary and compulsory measures fostering the good governance of energy resources. This paper contributes to the literature by finding empirical evidence of the linkages between such measures and the oil and gas import pattern of EU's Member States. The proposed empirical design is innovative, because the unit of analysis is not a specific country but the coupled exporter–importer countries. It proposes a log-linear panel data analysis using two different models, static and dynamic, and three different estimators for each model, which results in 24 different models being estimated. According to our results, the quantity of oil and gas imported by EU countries is related positively to the transparency in energy resources' management in exporting countries (as proxied by EITI). However, we did not find empirical evidence supporting a relationship between the quantity of oil and gas imported by EU countries and the good energy resource governance in exporting countries (as measured by NRGI).

Our results suggest that energy governance, although it is not explicitly incorporated into European energy policy, seems to play a role in the origin of the EU's oil and gas imports, showing that the narrative of "governance as transparency" is gaining momentum, at least in the EU. In this sense, we have found coherence between the European policy supporting the EITI and EU oil and gas import pattern. However, even after its recent update the EITI does not provide a measure of GRG, like the RGI does, offering only a "cheap" substitute. Though the EU seems concerned with GRG, it should have gone beyond transparency to explicitly include GRG in the Energy Union or the European Green Deal, but neither initiative includes any reference to this issue. The finding that EU Member States tend to import more oil and gas from EITI members than from non-members reveals a preference for transparency, which becomes operational through the transparency and accounting directives. This offers a first step towards GRG, both signaling propensity to value transparency and affecting the EITI upgrade process, which implies significant in-roads into GRG.

One limitation of our research is the availability of data for the RGI, which, in turn, affects the sample size of some models, especially the gas dynamic ones. However, given the overwhelming effect of the lagged dependent variable in dynamic models, the effects of this limitation hamper further analysis. A second limitation is that in the Global North it is private companies, not countries or public companies, that import oil and gas. Notwithstanding this, public policy matters: enacting disclosure legislation, as well as supporting institutional innovation and benchmarks (like EITI and RGI), influence companies' behavior regarding international partnerships, investments and reputational strategies.

Finally, there are avenues for further research that would be worth exploring. First, the analysis could be broadened to include other resources, like strategic minerals used in renewable technologies. Second, the analysis may be broken down and replicated at a lower level, for instance, by EU member state or by RGI component. Another interesting approach would be to compare EU's import patterns with other major importing countries, like the US, China, India, Japan, or South Korea. Finally, other indexes not specifically related to resources like World Bank's Governance Matters could be used to verify the existence of a positive correlation between general and energy sector governance and its impact on oil and gas import patterns.

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Annex

Annex I. List of countries included in the sample

Oil				Gas			
Excon	**Obs.**	**Imcon**	**Obs.**	**Excon**	**Obs.**	**Imcon**	**Obs.**
Algeria	18	Austria	25	Algeria	10	Austria	2
Angola	14	Belgium	34	Angola	1	Belgium	14
Australia	1	Bulgaria	12	Australia	1	Bulgaria	1
Azerbaijan	18	Croatia	13	Austria	4	Croatia	8
Belarus	3	Czech R.	13	Belgium	7	Czech R.	2
Belgium	1	Denmark	8	Croatia	2	Denmark	2
Brazil	9	Finland	9	Czech Republic	1	Estonia	1
Cameroon	8	France	35	Denmark	3	Finland	1
Canada	8	Germany	42	Egypt	7	France	13
Colombia	11	Greece	20	Equatorial Guinea	2	Germany	3
Congo	8	Hungary	8	France	5	Greece	12
Czech Republic	2	Ireland	11	Germany	9	Hungary	6
D.R. of the Congo	1	Italy	35	Hungary	3	Ireland	1
Denmark	9	Lithuania	15	Italy	4	Italy	21
Ecuador	2	Netherlands	36	Kazakhstan	1	Latvia	1
Egypt	13	Poland	17	Libya	2	Lithuania	2
Equatorial Guinea	7	Portugal	19	Netherlands	9	Luxembourg	5
Estonia	5	Romania	14	Nigeria	8	Netherlands	8
Finland	1	Slovakia	1	Norway	15	Poland	10
France	5	Spain	37	Oman	1	Portugal	9
Gabon	8	Sweden	17	Peru	4	Romania	6
Georgia	8	United Kingdom	46	Portugal	1	Slovakia	2
Germany	5			Qatar	8	Slovenia	6
Greece	1			Russia	20	Spain	16
Hong Kong	1			Slovenia	2	Sweden	1
Hungary	3			Spain	4	United Kingdom	11
Iran	14			Trinidad and T.	8		
Iraq	17			Turkey	1		
Ireland	1			Turkmenistan	3		
Israel	1			Ukraine	2		
Italy	7			U.A.E.	1		
Kazakhstan	18			United Kingdom	5		
Kuwait	10			United States	4		
Kyrgyzstan	1			Uzbekistan	4		
Latvia	5			Yemen	2		
Libya	17						
Lithuania	5						
Malta	1						
Mexico	9						
Netherlands	7						
Nigeria	17						
Norway	16						
Oman	7						
Papua N.G.	2						
Peru	1						
Poland	3						
Portugal	1						
Qatar	3						
Romania	2						
Russia	21						
Saudi Arabia	17						
Singapore	1						
Slovakia	2						
Spain	1						
Sweden	3						
Syria	11						
Trinidad and T.	3						
Tunisia	8						
Turkey	6						
Turkmenistan	7						
Ukraine	7						
U.A.E.	9						
United Kingdom	14						
United States	9						
Venezuela	10						
Yemen	3						