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**Firms' strategic preferences, national institutions  
and the European Union's internal energy market:  
A challenge to European integration**

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**Abstract:** Although liberal intergovernmentalism claims that economic interest groups shape national preferences towards integration, while neofunctionalism assumes that these groups support integration for its expected economic benefits, these approaches cannot account for variation in EU integration across policy areas. We employ an analytical framework to explain divergent firm preferences towards integration in the EU-wide internal energy market. Building on Weber and Hallerberg's (2001) specification of transaction costs and external (competitive) threat as independent variables in their model of divergence in firm preferences towards 'binding' EU rules, our analysis incorporates domestic market structure and firms' international relationships as intervening (contextual) variables. Testing our argument in four cases – Germany, Italy, France and the UK – confirms that distinct national institutions promote divergent attitudes towards the internal energy market because domestic market structures and firms' international settings respond to transaction costs and external threat in this market within the context of member states' traditional local models of capitalism. In relation to theories of European integration, this study underscores the importance of varieties of capitalism in preference formation vis-à-vis integration, offering additional insights into the

conditions under which national institutions have been influential in response to common external pressures in the energy market.

**Keywords:** economic integration, energy policy, institutions, integration theory, political science

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## 1. Introduction

Numerous theories have been advanced to explain the role of economic interest groups in the EU integration process. Liberal intergovernmentalism claims that economic interest groups play a key role in national preference formation towards integration, while neofunctionalism, assuming wider autonomy for supranational institutions vis-à-vis national governments, argues that economic interest groups support integration only if it benefits them. However, these approaches cannot adequately account for variation across firms in support of EU integration. We focus on the conditions under which firms' strategic preferences, which are shaped by market structures and national institutions, result in divergent stances towards the European internal energy market.

We develop and test an analytical framework to explain divergence in preferences towards the EU internal energy market. Our analysis builds on Weber and Hallerberg (2001), who identify transaction costs and external (competitive) threat as independent variables in explaining divergent firm preferences towards 'bindingness' (i.e., tighter EU rules and regulations in their respective industrial sectors), but incorporates national institutional settings and firms'

international economic relationships as intervening variables. Specifically, transaction costs and external threat constitute independent variables, while domestic market structure and firms' international relationships, both embedded in specified variants of capitalism, represent our major explanatory intervening variables. Testing this construct in four case studies (viz., Germany, Italy, France and the UK), we find that that firms' position towards further integration cannot be explained solely by transaction cost and threat levels, but also by structural market conditions and firms' international economic relationships shaped by the context of varieties of capitalism (henceforth, 'VoC').

## **2. Preference formation and regional economic integration**

There exist several major explanations for preference formation by interest groups, states, and supra-national institutions in the EU integration process. Intergovernmentalism explains preference formation, particularly at the national level, by reference to economic interest groups' attitudes towards European integration. Moravcsik (1998), for example, argues that national governments derived their policies on major issues such as the Single European Act and economic and monetary union based on the interests of large multinational and financial firms. In this vein, progress towards European integration is a two-step function: First, economic interest groups exert preferences towards integration in national policy-making realms and then states bargain with each other to translate and amalgamate these preferences into EU policy. Yet, this rationalist, bottom-up account of interest aggregation fails to account for the precise pace and scope of integration in specific issue areas or for variation in integration across them. This is because processes of integration (success or failure) evince the sometimes powerful blocking, channeling and mediating impacts exerted by autonomous or semi-autonomous institutions at multiple levels – both domestically within EU member states and at the pan-EU level – that have been strongly shaped by earlier interactions between firms and official actors.

Conversely, neofunctionalism, rather than delineating the role of economic interests in preference formation, simply assumes that these groups support integration if it benefits them. For example, Mattli (1999:47, 49) argues that firms support supranational governance structures fostering market integration since these new rules and institutions reduce transaction costs stemming from tariffs, quotas and competing standards. Accordingly, given the extent to which transaction costs fall via harmonization of regulations and standards, interest groups favouring integration across sectors are a significant impetus for functional spillover. Furthermore, neo-functionalism diverges from liberal intergovernmentalism in assigning greater autonomy to supranational institutions vis-à-vis national governments and more restricted influence to economic interest groups. For example, Renner (2009) argues that the neofunctionalist ideas of European Commission officials were crucial in exporting EU rules via creation of the Energy Community of Southeast Europe. However, as Renner (2009:4) qualifies, Commission directives intended to foster a common internal energy market are 'far from being fully implemented'. Similarly, the spillover effects of the Energy

Community and ‘concrete results in implementing the treaty’ are mixed (Renner 2009:5, 12). Thus, the focus of neofunctionalism on spillover effects – that is, integration in a highly technical, political and strategic area such as energy generating the institutional capacity for possible spillover into other areas – precludes any role for market structures and national institutions in explaining variation among firms’ preferences towards integration across sectors.

From a competing perspective, Mayer (2008) argues that historical institutionalism plausibly explains the emergence of EU external energy policy, but this argument cannot explain divergence in firms’ preferences, which weakens integration and inhibits further transfer of power to the EU on energy policy. While it is suggested that the Commission has employed agenda setting and expertise to advance external energy policy, especially in terms of the Energy Charter and Interstate Oil and Gas Transport to Europe (INOGATE), it could not expand its energy-specific powers in the face of member-state opposition (Mayer 2008:263). Moreover, while the Commission understandably lacked the power to push Russia to ratify the Energy Charter Treaty, neither could it amend the EC Treaty to include a separate energy chapter, seen as critical for a common energy market. Thus, given Mayer’s (2008:270) argument that Commission practices have gained credibility among member states, it is puzzling that energy-market liberalisation has not brought about a fully functioning and binding internal energy market. There has been disappointment on liberalisation of gas and electricity markets in light of the Commission’s directives. As the Commission’s annual report to the Energy Council on progress towards creating the internal gas and electricity market emphasized, the internal energy market remains fragmented and there has been ‘a lack of enforcement action by the competent authorities in member states (European Commission 2010). In fact, the Third Gas Directive adopted in July 2009 was a toned-down version preserving member states’ initial positions and providing them with opt-outs vis-à-vis the internal energy market. Thus, the Commission has been constrained by the interplay between member states and firms. Therefore, one needs a comprehensive framework to account for the known variance among firms in support of the internal energy market.

In this article we seek to enrich our understanding of preference formation in the integration process by emphasizing the importance of strategic interaction, context and force of circumstance (Stein 1990).<sup>1</sup> We consider interaction as dependent on contexts that have evolved through long-term interaction between firms and states at the national and international levels. Our analytical framework elucidates *how* strategic preferences and major asymmetries in market power result in divergent preferences towards integration in a given sector. Accordingly, while major asymmetries in the energy market include different levels of energy-import dependency (transaction costs) and different shares of Russian gas imports (external threat – see next section for conceptual definitions), the domestic market structures and international settings of firms show how firms’ strategic preferences are domestically VoC-rooted. In other words, our approach proposes that preference formation cannot be explained simply by reference to the situational factors of transaction costs and external threat. It also requires incorporation of the contextual factors of domestic market structure and

firms' international settings, mediating elements of strategic interaction historically embedded in particular national institutions.

Our explanatory approach proposes that preference formation at the national level relates to economic interest groups' attitudes towards integration, which seemingly fits within the liberal intergovernmentalism framework. Nevertheless, we argue that local models of capitalism, which produce distinct domestic market structures and international settings (for firms), mediate how these firms actually respond to transaction costs and external threat. It is these context-specific factors, by which concentrated interest groups often wield disproportionate political power on issues of major importance to them (Olson 1982), a claim confirmed by large European companies' demonstrably favourable access to EU-level policy-making processes (Eising 2004 and 2007), that influence the extent to which firms' preferences exert a dominating role in determining their respective member states' preferences towards integration in specific sectors. Accordingly, a major assumption in our study is that corporate strategic preferences are endogenous to their respective national institutional settings, which in turn translate these preferences into national policies towards integration in a given sector.

National institutions refer to distinct domestic systems within political, social and legal environments that support property rights, contractual relationships and governance systems adopted by local firms. These institutions have emerged through a long history of interactions between political and economic elites and embody different levels of statism and corporatism. Accordingly, these distinct institutions influence preference formation through several possible causal pathways. For example, they affect the distribution of power among actors in policy making, determine perceptions and interest articulation, thereby affecting the nature of policy making, or influence the very capacities of states to make policy (Hall 1986, Thatcher 1999, Hall and Soskice 2001). Thus, while company preferences matter in national preference formation towards European integration, as argued by Moravcsik (1998), the VoC factor is the major one that systematically explains divergence in preference formation in our analytical framework.

Our findings reinforce the argument that economic interest groups do not act principally in favour of European integration. Leblond (2008), identifying an important lacuna in the assumption of both liberal intergovernmentalism and neofunctionalism that economic interest groups have full information about the likely costs and benefits of further integration, ascribes the anomaly of integration failure despite economic interest groups' initial support to uncertainty. Uncertainty prevents actors from sustaining support for further integration, as actual Commission legislative proposals delineate cost-benefit balances more clearly and thus motivate subsequent courses of action towards the legislation. As discussed by Grossman (2004:641), a policy issue might evoke major uncertainty and 'favor a strengthening of existing policy networks at the national level'. In other words, firms with multinational profiles or mobile capital assets should eschew further liberalisation that worsens uncertainty.

Within this framework, we consider not just the ‘payoff environment’ but also ‘the importance of context’ of interaction between firms and states (Stein 1990:195-197). Therefore, contingencies inherent in national market structures require analysis of the interaction between firms and states vis-à-vis the integration process. Weber and Hallerberg (2001:174) examine firm preferences in three industries to explain uneven levels of institutional ‘bindingness’, arguing that transaction costs and external threat explain the variance in corporate preferences for integration within a given industrial sector. However, their rationalist argument, located in the new institutional economics and strategic bargaining literatures (Mattli 1999, Milner and Yoffie 1989, Williamson 1985), unduly excludes the significant influence of structural market conditions and national institutional setting. According to the causal relationship Weber and Hallerberg (2001:177) identify, higher (lower) levels of external threat and transaction costs induce firms to give greater (lesser) support to binding institutions. However, for example, observed low (high) support in the presence of high (low) transaction costs and high (low) external threat in the respective member states’ energy market is anomalous. Indeed, joining external threat and transaction costs to the intervening variables of firms’ domestic and international market contexts, our model expects different outcomes from those of Weber and Hallerberg (2001:177-178), as applied to EU internal energy market liberalisation.

We focus on the liberalisation of the gas market to analyze divergence in preference formation towards the creation of the internal energy market for two major reasons. First, official statements of the Energy Community Treaty (signed by the European Community and its contracting East European countries) and the European Commission’s Green Paper ‘A European Strategy for Sustainable, Competitive and Secure Energy’ have emphasized the merit of creating the internal energy market based particularly on liberalisation of the gas and electricity markets.<sup>2</sup> Second, given the official emphasis, liberalisation of the gas and electricity markets is a major policy instrument to create an energy community and internal energy market. Accordingly, natural gas is important to understand the dynamics of energy supply in relation to divergence in preference formation towards integration of the internal energy market. This is because (i) natural gas is the second largest energy supply resource after oil for the EU; (ii) Russian gas imports are projected to increase, thus increasing the perceived urgency for some of energy supply diversification; (iii) natural gas remains primarily a network bound energy supply, thus limiting the extent of foreseeable supplier diversification relative to oil; and (iv) electricity, which can be supplied by local EU energy resources or (mostly) by imported natural gas, is similarly network bound in terms of its distribution. For example, as nuclear, solid (i.e., coal) or renewable sources can be supplied locally in the EU, they are important elements in preference formation, given that their associated transaction costs occur only in the downstream sector of the internal energy market. On the other hand, natural gas entails important transaction costs not only in the downstream sector but also in the upstream sector of the internal energy market. Therefore, natural gas is crucial to achieving an integrated internal energy market in line with the official goals of the Energy Community Treaty and the EU Commission’s market-liberalisation

strategy. In short, natural gas provides an essential focus for efforts to understand the myriad challenges to fostering an integrated liberal internal energy market.

Lastly, it should be noted that we adhere to the classic analytical and empirical division of the energy sector into two sub-sectors for the purpose of clarifying the associated costs and value-added activities in this sector. The upstream sub-sector consists of exploration, extraction and production of energy resources. The downstream sub-sector includes transportation, refining, and distribution of energy resources for household and industrial consumption.

### **3. The contingent effects of varieties of capitalism on preference formation**

We incorporate transaction costs and external threat into a larger explanation of disparate attitudes towards formation of the EU internal energy market. Here, local modes of capitalism that determine domestic market structures and international economic settings of firms also shape preference formation regardless of the level of transaction costs and external threat facing any given EU member state. Accordingly, the four variables applied in our analytical framework are defined conceptually and operationalized by the related indicators below.

First, the EU imports 50 percent of its energy and is projected to depend on imports for 70 percent of its energy by 2030. Significantly, roughly half of EU gas is supplied by Russia, Norway, and Algeria, with gas imports foreseen to reach 80 percent of consumption in the next 25 years (European Commission, 2006). Furthermore, a new group of large overwhelmingly state-owned energy companies, the so-called ‘new seven sisters’, control almost one-third of the world’s oil and gas production and more than one-third of its oil and gas reserves. Thus, the European internal energy market is characterized by high ‘ex ante transaction costs’, operationalized here as the recurring costs of purchasing and safeguarding purchases of imported energy via negotiated agreement. In other words, unless the EU member states have sufficient indigenous source(s) of nuclear, oil, gas, coal or renewables, ex ante transaction costs in the upstream energy market, measured in our model as energy-import dependency. Although energy-import dependency in our dataset is measured at the country level, a country’s energy-import dependency and domestic energy firms’ dependency on foreign supplies have an obvious relationship. Thus, higher energy-import dependency of a country corresponds to higher transactions costs for domestic energy firms. Therefore, energy-import dependency is our main operational indicator of transaction costs.

Second, uncertainty, particularly in terms of ex ante transaction costs, should motivate a firm to seek vertical control in order to capture the benefits and reduce the ex post transaction costs associated with the use of specific assets. To the extent that firms can establish hierarchical governance structures in the downstream energy market (i.e., ownership of bulk imports as well as transit and distribution facilities to deliver them), they can lower the ‘ex post transaction costs’ (Williamson 1985:20-21) entailed in organizing the onward flow of imports, given that they have previously secured energy supplies in the upstream segment of

the energy market. Therefore, the strongly prevalent vertical integration of energy firms operating in the energy market typically reflects a commonly perceived need for hierarchical structures of energy production, transportation and distribution. If a firm has limited operations in the upstream sector, or non-secure access to supplies, especially of oil or gas, ex ante transaction costs will be higher because of its larger relative need for imported energy. In other words, unless a firm secures most of its energy supply resources via nuclear, coal or renewable energy, which can be and are typically produced domestically or in EU area, external threat, operationalized here as dependency on a *particular* foreign gas supply source, will be higher. Accordingly, in our model, external threat, measured as the fraction of Russian gas imports in total gas consumption, determines the level of uncertainty (structural competition in the energy market).<sup>3</sup> Given the depleting reserves of Norway and Algeria, Russia, 19.3 trillion cubic feet (Tcf) of natural gas production (the second largest producer but the largest exporter) and 1680 Tcf of proven reserves (the largest) in the world gas market (EIA 2010), is expected to increase its role as a supplier to the European gas market. Therefore, Russian gas imports in total gas consumption are a major indicator of external (competitive) threat to European energy firms in the event that the EU market is further liberalized without a commensurate degree of complementary diversification of likely foreign supply-source countries and companies.

Third, our framework also incorporates Williamson's (1979) work on how transaction costs determine governance structures. Transactions in the energy market recur frequently, heightening incentives for specialized institutional arrangements (Williamson 1979:246-9). However, our framework suggests that member-state firms create divergent governance structures, not only in response to the relative frequency of costly transactions and external threat, but also due to different configurations of business-state relations rooted in distinctive national institutions (Hall and Soskice 2001, Doremus et al 1998, Whitley and Kristensen 1996). Thus, domestic market structure and international setting (specifically, the extent of strategic partnership v. contractual relationship with a key foreign energy supply firm), which are in turn embedded within local models of capitalism, determine how firms choose to adjust to transaction costs and external threat. In other words, the varieties-of-capitalism literature implicitly argues that national institutions can shape firms' strategic preferences (Allen 2004:99-102).

Moreover, asset specificity in transaction costs is important. Transactions involve assets that are more or 'less transferable to other uses or users' (Williamson 1981:1548). Salient investments in the downstream energy sector (viz., refineries, local distribution gas pipelines, or electricity network and grids) cannot be costlessly adapted to non-energy uses. Thus, no matter where EU member states get their energy supply sources from or whether member states are dependent on imported energy in the upstream sector, ex post and asset specific costs are high in the downstream sector of the energy market. Therefore, in our model, downstream gas-market concentration serves as an indicator of how firms are likely to respond to ex post and asset-specific transaction costs. In other words, the specialized governance structure of a firm not only aims to minimize recurring ex post and asset-specific

transactions costs but also to preserve the existing level of market concentration according to the influence of “overarching institutional structures of political economy” (Hall and Soskice 2001:15).

Fourth, in our model, the international setting of a firm is important in securing energy supplies or minimizing ex ante transaction cost and/or external threat. In fact, transaction costs and external threat are not sufficient to explain the divergence in corporate strategic preferences, formation of which is endogenous to two classes of capitalism, ‘liberal market economy (LME)’ and ‘coordinated market economy (CME)’ (Hall and Soskice 2001). Therefore, international setting is measured as contractual relationship, indicating the stronger operation of LME institutions favouring market-based relations, or strategic partnership with foreign energy firms, indicating the dominant effect of CME institutions that favour market concentration in the hands of traditional national champions.

Eight possible situations exist in this framework. This number equals the sum of four possible value permutations on the two independent variables (i.e., high or low transaction cost, measured as the energy import dependency, and high or low external threat, measured as the Russian gas imports in total gas consumption) joined with two possible values (either LME or CME) on the context-dependent variable of the traditional VoC classification (see Table 1).

**Table 1: The expected relationship between the independent variables and support for the internal energy market**

Independent variables		Intervening variables <u>Context</u>			Dependent Variable
<u>Level of transaction cost</u> (energy import dependency)	<u>Level of external threat</u> (Russian gas imports in total gas consumption)	<u>Varieties of Capitalism</u>	<u>Domestic market structure</u> (downstream market concentration in gas)	<u>International setting</u> (extent of strategic partnership v. contractual relationship)	<u>Expected Support for Internal Energy Market</u> (Divergence in Preferences)
H	H	LME	H	L	M (+)
L	L	LME	L	L	H
H	L	LME	H	L	H
L	H	LME	H	L	M (-)
H	H	CME	H	H	L
L	L	CME	H	L	M (-)
H	L	CME	H	H/L	L
L	H	CME	H	H/L	M (+)

An LME by definition necessitates that contractual relationships will prevail over strategic (and often heavily politicized) partnerships with key foreign supply firms (indicated as ‘low’ international setting in Table 1). Yet, whenever transaction cost and/or external threat are high, concentration in domestic market structure will increase in response to recurring ex post and asset-specific transaction costs in the downstream energy sector, even in LMEs. Thus, by implication, the only case with low concentration in domestic market structure in an LME occurs when both transaction cost *and* external threat in the energy market are also low. Accordingly, the same mutual combination of low values on the independent variables that reduces concentration of market power in an LME lends itself to a high degree of expected support for a liberal internal energy market (See Table 1, row 2). But even in the presence of mutually high transaction cost and external threat levels, an LME’s expected support for the internal energy market will be medium, but in the direction of high (See Table 1, row 1).

Again, an LME-based company’s expected support will be high when transaction cost is high and external threat is low because its predominantly international contractual relationships predispose it to favour further internal energy-market liberalisation for the purpose of decreasing ex ante transaction costs (See Table 1, row 3). The only case where LME-based firms’ support for the internal energy market should begin to fall off (viz., medium, but in the direction of low) occurs when transaction cost is low but external threat is high. This may reflect the belief that further internal energy-market liberalisation will raise the degree of external threat (competition) by upstream-based foreign supply firms in the downstream sector (See Table 1, row 4).

By contrast, CMEs are defined by high concentration in their domestic market structure. This is because member states, whether having high energy-import dependency or low, the latter indicating that they have sufficient domestic energy supply resources, such as nuclear, coal, renewable, oil or gas, high ownership concentration in major distribution networks (i.e. gas pipelines, electricity network or grids) will exist, given the dominant presence of traditional national champion energy firms or high ex post and asset-specific transaction costs in the downstream energy sector. Second, when both transaction cost and external threat are high, a CME-based firm necessarily pursues strategic, rather than contractual, partnerships with key foreign supply firms (indicated as ‘high’ international setting in Table 1). Third, when a CME-type member state faces opposite combinations either of high transaction cost and low external threat or high external threat and low transaction cost, the international setting of a firm is indeterminately strategic or contractual (indicated as high/low in Table 1). Accordingly, in CMEs facing high transaction cost and external threat (one of the most salient cases of interest), expected support for the internal energy market will be *low* so as to avert challenges to the existing level of concentration, given an extant strategic partnership with a foreign supply firm (See Table 1, row 5). The expected support for the internal energy market will be similarly low in CMEs when energy-import dependency (ex ante transaction cost) is high and external threat is low, in order for their firms to decrease high ex post and asset specific costs in the downstream energy sector and/or to keep their dominant domestic market

concentration, especially if they have a strategic partnership in the international setting (See Table 1, row 7).

On the other hand, when transaction cost and external threat are both low, the expected support for internal energy market in CMEs will rise a bit to medium, but still in the direction of low, support, given the enabling of international contractual relationships coupled with domestic firms' stakes in the existing level of domestic concentration (See Table 1, row 6). Similarly, the only case where expected CME-based firm support rises as high as medium, also in the direction of high, occurs when transaction cost is low and external threat is high. That is, unless a strategic partnership exists to protect against the most adversely competitive result, further liberalisation may decrease external threat and help firms keep their existing level of domestic concentration (See Table 1, row 8).

To summarize, both sets of variables in our suggested model, the independent ones – transaction costs and external threats, as well as the intervening contextual ones – domestic market structure and firms' international settings, work to explain divergence in preference formation for the EU internal energy market. An assumption of the model is that firms' preferences towards integration in a given sector are translated into member-state preferences according to unique national institutional contexts that determine state-business relations based on the findings in the VoC literature. In other words, degree of transaction costs and external threat in a given sector are not sufficiently explanatory because, while these variables do influence firms' strategic preferences, the latter are primarily endogenous to one of the two main classes of capitalism delineated above. Therefore, domestic market structures and firms' international settings respond to transaction costs and external threat as mediated by the context rooted in the prevailing local model of capitalism. For example, preferences in LMEs, such as the UK, where firms are relatively more diffuse, are more favourable to further liberalisation, while preferences in CMEs, such as Germany, are less favourable given their domestic market structure and norms (Hall and Soskice 2001, Humphreys and Padgett 2006).

#### **4. Case Studies**

We adopt a comparative case study approach to examining the relative impact of the two variables identified by Weber and Hallerberg (2001) – external threat and transaction costs – against that of the postulated complementary contextual variables, domestic market structures and EU member-state firms' international relationships with a foreign energy supply firm, on member states' support for the internal energy market. In light of the findings of Weber and Hallerberg (2001), first, we examined whether and to what extent each member state's observed proportion of total energy imports in overall use (our operationalization of transaction costs) and the fraction of Russian gas imports in total gas consumption (external threat) explained actual preferences vis-à-vis support for the EU internal energy market. In fact, there are highly salient anomalies, especially Britain's well-known support and Germany's vehement opposition, despite the argument of Weber and Hallerberg, which

would implicitly anticipate Britain's low level of support motivated by its low transaction costs and external threat in its energy market and Germany's expected high level of support shaped by its high scores on the same variables. Therefore, we selected cases to demonstrate whether the analytical framework containing four factors (transaction costs, external threat, domestic market structure and firms' international relationships) presented in section 3 better explains the divergence in preferences supporting the internal energy market.

In fact, Germany and the UK are least-likely cases because their observed levels of support for the internal energy market are low and high, respectively, despite Germany's doubly high and the UK's dually low values on energy import dependency and share of Russian gas in total gas consumption. Thus, these stark mirror-image cases allow us to examine the influence of varieties of capitalism (CME of Germany and LME of the UK) as conceptualized in the intervening contextual variables of domestic market structure and international setting (see Table 2, row 1 and 2). On the other hand, France provides a likely case, since France enjoys a wider availability of domestic energy alternatives, namely nuclear power, and lower levels of energy import dependency and external threat. As Russian gas is not salient in its overall gas consumption, its firms' expected support for common energy will be low, in line with Weber and Halleberg's (2001) findings. Yet, the observed level of support is actually somewhat higher (medium, albeit in a negative direction), which necessitates examining the influence of varieties of capitalism, particularly among CMEs (i.e. Germany vs. France), through the contextual variables of domestic market structure and international setting (see Table 2, row 3). Italy is another likely case, since high energy import dependency and relatively lower fractions of Russian gas in total gas consumption (supplied also by Algerian gas), compared to Germany, should lead Italy to support the internal energy market rather than being one of its staunchest opponents (see Table 2, row 4). Therefore, Italy's observed low level of support for the internal energy market is important, because, except for the UK, all other selected countries have high downstream market concentration, which sharpens our focus on the influence of the respective balance of contractual relationships vs. strategic partnerships for German, French, and Italian firms.

**Table 2: Expected vs. observed support for the internal energy market in case studies**

	Independent variables				Intervening Variables			Dependent Variable
					Context			
	Level of transaction cost (energy import dependency)	Level of external threat (Russian gas imports in total gas consumption)	Expected support for internal energy market (W & H study)	Observed support for internal energy market	Varieties of capitalism	Domestic market structure (downstream market concentration in gas)	International setting (extent of strategic partnership v. contractual relationship)	Expected support for internal energy market (divergence in preferences)
Germany	H	H	H	L	CME	H	H	L
UK	L	L	L	H	LME	L	L	H
France	L	L	L	M (-)	CME	H	L	M (-)
Italy	H	L	M	L	CME	H	H	L

The EU's regulatory drive for liberalisation in gas market has been a long term challenge since its start in 1998 with the European Gas Directive, which was followed by the second Gas Directive in 2003 and the third one in 2009. In January 2007, the Competition Directorate General of the Commission issued a report underlining the importance of a common internal energy market, thereby prompting the EU Commission president to issue a new EU energy strategy (European Commission 2007a). Following the Commission's third Energy Package Proposal in September 2007, member states were split on the Commission's proposal for 'ownership unbundling', or dividing the production, transmission and retail assets of integrated energy firms. France and Germany spearheaded the opposition, arguing that powerful firms were needed in the downstream sector to counter the strength of exporting companies in the upstream sector (European Commission 2007b:207; Correljé and van der Linde 2006:540). While the EU Parliament rejected a compromise deal based on French-German proposals in June 2008, Germany and France, taking into consideration its upcoming EU Presidency, maintained their opposition.<sup>4</sup> The third energy package negotiation process among member state governments resulted in a compromise in October 2008, which in fact did not force Germany and France to sell off their distribution networks and allowed them to be put under outside supervision, the oversight of a new EU Agency for the Cooperation of Energy Regulators (ACER), while in other cases it favoured full unbundling.<sup>5</sup> Thus, the transmission system would be legally unbundled from energy production without changing the ownership structure of vertically integrated energy firms. Furthermore, Germany opposed the so-called 'Gazprom Clause', which stated that outside suppliers must be open to EU investments (reciprocity clause) and their ability to buy up distribution networks limited. The energy ministers relaxed the reciprocity clause by allowing member states to strike individual

bilateral agreements with a foreign energy supplier country to acquire gas and electricity distribution networks (Wielaard 2008b). However, the EU governments retain their national power under certain conditions to protect their unbundled vertically integrated energy firms in the event of a takeover. This 'level playing field' article was needed to allow member states that opt out of full ownership unbundling to protect their parent energy firms against takeovers from companies with independent transmission operators and to allow other partially deregulated firms to keep ownership of their distribution networks under strict regulatory conditions (Hall, S. 2008).<sup>6</sup> Likewise, the new EU agency's (ACER) power would be strictly limited to cross-border issues. In other words, it was not to be a substitute for national regulators, nor was it to be a European regulator. Building on this process and the compromise provisional agreement among member states, the EU Parliament approved the Third Gas Directive in April 2009. In short, in this watered down energy package, firms can unbundle by either selling off a business in downstream transmission networks, transfer its management over an independent system operator so that it retains its ownership, or make an independent transmission operator preventing management of the parent energy firm moving between production and transmission (White 2009a).

Consequently, member governments maintained their initial positions despite deregulation rules that actually made it more complex for an infrastructure unit of an energy firm to become more independent.<sup>7</sup> The final agreement was interpreted as giving 'too much ground to naysayers' and as a compromise reached at the expense of compounding difficulties in enforcement and retaining the many options that favour incumbent national champions.<sup>8</sup> Thus, the new directive reflected the divergent preferences of member states emanating from distinct national institutional settings, which shape both their downstream market structures and firms' choice of strategic or contractual relationships with external gas suppliers in the upstream energy sector. Below we examine how incumbent energy companies have influenced preferences towards liberalisation of EU gas markets and creating the internal energy market.

#### **4.1. The German case**

The German case allows us to examine the influence of VoC variables on the LME of the UK as well as major German firms' CME-type strategic international partnerships. Germany is highly dependent on energy imports (high transaction costs), but has relatively more fuel diversity in terms of both primary energy supply and domestic production (European Commission 2007c). Nevertheless, the share of Russian gas imports in total gas consumption is high (high external threat) compared to those of Italy and France.

The German gas market is highly concentrated, despite the 1998 liberalisation of German electricity and gas markets. The wholesale gas market is mostly divided among five large companies, namely EON-Ruhrgas, RWE, VNG, Wingas, and BEB.<sup>9</sup> The largest of these companies controlled 60% of the wholesale market and held 30% of over 600 regional distribution companies in 2007. Most large gas network operators are already legally

unbundled, but competition in the large consumer segment of the gas market has been insufficient due to the scarcity of new entrants (European Commission 2007d).

Among EU member states, Germany accounts for the largest number of contracts of the longest duration, nine years by straight average and fifteen years by volume-weighted average (European Commission 2007b:238-239). Likewise, EON and RWE control the vast majority of imported gas, but through long term contracts (European Commission 2007b:40). The existence of long-term supply contracts between the vertically integrated downstream gas companies and distributors as well as these large companies controlling trunk-line gas supplies is modal in a CME. That is, given the notable lack of German companies in upstream gas production, ex ante transaction costs for gas import dependency are high and thus so is the felt need for high market concentration to reduce ex post and asset specific transaction costs in downstream gas distribution networks. In fact, in May 2007, the Commission launched an investigation into RWE's suspected attempt to control gas transmission systems by raising costs for rivals using the network and by impeding their access to gas transport infrastructure in the North Rhine Westphalia region.<sup>10</sup> Similarly, the Commission alleged that EON was booking most of its long-term gas storage capacity at key entry points into the German gas network and preventing rival entry into this key infrastructure (White 2009d).<sup>11</sup> Moreover, the EU Commission fined EON and GDF (France), the first fine ever imposed in the energy sector and among the biggest in EU history, for suppressing competition by preventing cheaper gas suppliers from renting the MEGAL pipeline--carrying Siberian gas across Germany--and by colluding not to use the pipeline to sell into each other's market (White 2009b).

Overall both EON and RWE opposed liberalisation of the internal energy market as set out in the Commission's proposal for full unbundling in 2007. EON stated that ownership bundling would be 'going down a wrong path', while one RWE manager likened it to 'forced expropriation' (Crooks and Laitner 2007). Furthermore, EON's president criticized the EU Commission's antitrust investigation, arguing that the inevitable consolidation among large European utility companies would leave an even smaller core of large dominant groups able to cope with energy import dependency and Russian gas imports, particularly in electricity markets (Milne 2006). In fact, in 2006 some member states moved to stop their major utility firms from being acquired by other EU utility firms. For example, EON's takeover attempt in February 2006 of Spanish utility company Endesa met with fierce opposition from the Spanish government, which responding by subjecting takeover bids in the energy sector to mandatory review by the country's National Energy Commission. EON's bid was subsequently denied. Similarly, Enel, Italian ENI's utility subsidiary, failed in its attempt to acquire French utility company Suez, which later merged with GDF, France's national gas champion. The battle ended when Enel together with a Spanish construction group succeeded in acquiring Endesa in return for the sale of some Endesa assets to EON in April 2008.<sup>12</sup> In light of warnings from EU antitrust regulators, these large utility firms of vertically integrated energy companies of Germany and Italy (EON and ENI, respectively) expanded their downstream electricity operations to neighbouring countries.<sup>13</sup> While the Commission's

competition authority approved the Endesa deal, EON's chief executive stated that 'the Endesa-Enel-EON transaction may be one of the last big cross border deals done in the continent because of increasing protectionism'.<sup>14</sup> Thus, to the extent that vertically integrated energy companies in Germany can control ex ante costs through using their major international gas pipeline assets and their strategic partnership with Gazprom or by relying on their local nuclear, coal or renewable resources, they can avail of cross border utility networks to obtain economies of scale or high downstream market concentration in order to decrease ex post and asset specific transaction costs.

During the third energy package negotiation process, EON agreed to sell off its electricity transmission network in February 2008 and to free up gas storage capacity in December 2009 and RWE assented in May 2008 to sell off its gas transmission network in order to avoid fines pursuant to the Commission's anti-trust cases.<sup>15</sup> However, these sales cannot be considered as a change in companies' opposition to the third energy package. Rather, they reflected these companies' strategic interests in trading off between their high downstream energy market shares and their regional downstream operations. Overall, both companies resisted full unbundling and favoured a watered down version of liberalisation of gas and electricity markets known as the third way or independent transmission operator (ITO) system. This is because the proposed version by the Commission promised to heighten uncertainty (ex ante transaction costs) and external threat by abolishing the hierarchical governance structure of their domestic and regional energy markets that arguably holds down recurrent and asset specific transaction costs in downstream gas and electricity distribution networks. Furthermore, RWE's chief executive stated that the company is looking for a 'strategic buyer' for its gas transmission network rather than a simple third independent party.<sup>16</sup> Despite these German firms' settlements with the Commission, the October 2008 compromise among member states on the third energy package did not force further German corporate sell-offs of their distribution networks. Rather, partially unbundled firms were placed under outside supervision (ACER) and allowed to keep ownership of their distribution networks subject to strict regulatory conditions. In other words, the transmission system would be legally unbundled from energy production without changing the governance structure of vertically integrated energy firms. In fact, the German government maintained low support for liberalisation of the internal energy market, as evidenced in the energy minister's statements that full unbundling or an alternative to an independent system operator would mean 'expropriation of private companies' and that 'the issue of ownership is extremely important in Germany' (Wielgaard 2008a).

Accordingly, the reluctance of Germany to support 'unbundling' conceivably stems not only from mutually high transaction costs and external threat but also from the domestic market structure and the international setting of German energy firms. While all companies face common ex ante transaction costs or high energy import dependency, given the historical absence of any German firm in a significant international upstream energy position, the national legal and political environment forced adoption of similar firm strategies and consequent market concentrations to cope with competition for gas supplies. For example,

EON-Ruhrgas and BASF-Wingas have strategic partnership with Gazprom – their collective 49% share of a joint venture to build the Nord Stream gas pipeline under the Baltic Sea (Larsson 2007:22).<sup>17</sup> Moreover, EON-Ruhrgas represents the only non-Russian company with a seat on Gazprom's executive board. Thus, while these companies faced high transaction costs, they controlled them by employing their strategic partnerships, which in turn lowered external threat by securing access to Russian gas supplies and by increasing market concentration in downstream gas distribution networks. By contrast, RWE, facing the same high transaction costs but no strategic partnership with Gazprom, addressed these costs via a *long-term* contractual relationship within the context of CME rather than the shorter-term market-based contractual relationship more typical in LME. Moreover, RWE joined the Nabucco project consortium to decrease the uncertainty and ex ante transaction costs associated with imported energy supplies.<sup>18</sup> In other words, German firms pursued similar strategies to secure gas supplies by means of entering different international pipeline projects within the context of domestic market structure and international setting embedded in CME institutions.

In light of German companies' strategic partnership with Gazprom, Germany unsuccessfully insisted on removing the so-called 'Gazprom Clause' from the third energy package proposal, but did convince energy ministers to relax the clause by allowing member states to strike individual bilateral agreements with Gazprom to acquire gas and electricity distribution networks. Similarly, German Chancellor Merkel addressed a letter to the Commission calling on the EU to support Gazprom's Nord Stream and South Stream pipelines in January 2009, when the Russian-Ukrainian gas crisis left some EU member states without gas, and expressed ambivalence at channeling EU funds to the Nabucco project.<sup>19</sup> In other words, the German government aligned itself with the position of largest German gas importers EON-Ruhrgas and BASF Wintershall, which have a joint venture project with Gazprom to build the Nord Stream pipeline.

Consequently, the German case demonstrated that when transaction costs and external threat are high, expected support for the internal energy market will be low, in line with CME-consistent preferences of Germany's government and largest energy firms to engage in a strategic relationship with Gazprom. Therefore, our suggested model offers a better explanation for Germany's low support of the EU internal energy market when compared to Italy's similarly low support, indicating the explanatory power of distinct historically rooted institutional relations between their energy firms and the state.

#### **4.2. The Italian case**

The Italian case demonstrates comparatively the strategic international partnership of a traditional national champion firm. Highly dependent on energy imports, Italy's reliance on (mostly pipeline) gas imports increased 118% between 1990 and 2004 (European Commission 2007e). Although the Italian retail gas sector has been fully open to competition since January 2003, Ente Nazionale Idrocarburi's (ENI) historically dominant role in the

domestic gas market left a legacy of high market concentration, whereby the company controlled 62% of gas imports, 44% of retail activity and 84% of domestic production in 2007 (European Commission 2007f). The close state-ENI relationship helps to clarify preference formation vis-à-vis liberalisation of the Italian gas market within the context of a CME.

Established in 1953 as a state-owned company with a mission to secure energy supplies from resource-rich countries, ENI was partially privatized in 1992, but the Italian state retains a one-fifth share.<sup>20</sup> Various Italian governments have sold stakes in ENI, while retaining a degree of control over this company. In fact, despite opposition from the EU Commission, in April 2006, the Italian government arrogated veto power over hostile takeovers of ENI subsidiary Snam, a ‘golden share’ arrangement intended to defend national energy companies from foreign takeovers (Buck 2005; Buck and Michaels 2006). Furthermore, while Italian authorities have deliberately intervened to break up market concentration and overcome barriers to competition in the domestic market, they have been influenced more by narrower conceptions of national energy security.

For example, in 2004, Italy’s energy regulator asked ENI to transfer ownership over, and rights to use, the international gas pipelines supplying the Italian market to gas-transport company Snam to widen independent access to larger volumes (i.e., ‘liquidity’) for new entrants in the gas market.<sup>21</sup> In 2005, the Italian Authority for Electric Energy and Gas offered more LNG to compete with ENI-controlled pipeline gas imports and advocated consolidation of many small gas distribution companies to increase economies of scale and lower costs and prices.<sup>22</sup> It also opposed ENI’s decision to divide the additional capacity in the Trans Austria Gasleitungen (TAG) pipeline among 150 operators, rather than two or three big operators that could compete more effectively with ENI.<sup>23</sup> Likewise, the authority developed a code of conduct to guarantee access to new LNG regasification terminals then under construction or in the planning phase.<sup>24</sup> Nevertheless, Italy has opposed full unbundling and the internal energy market since it prefers to maintain ENI’s hierarchical governance structure and strategic partnership to mitigate ex ante transaction costs in the upstream sector and ex post and asset specific transaction costs in the downstream sector of the gas market.

In other words, the Italian government’s low support for liberalisation in the internal energy market reflected its preferences for lowering recurrent transaction costs in securing gas supplies and asset specific transaction costs in transporting this gas in line with ENI’s strategic motivation to maintain its vertically integrated governance structure, which dovetails with the company’s strategic partnership with Gazprom in upstream gas production and in downstream international gas pipelines. As ENI’s chief executive has argued,

In Europe every new drive to reduce further the influence of former domestic monopolies or dominant operators will open up new opportunities for those big suppliers that already rule the market up to European borders. In short, if supply monopolies move in to consuming markets as retailers they will wield considerable competitive power (Scaroni 2006).

ENI has reiterated opposition to reducing its stake in network operations.<sup>25</sup> The company further proposed to diversify supply by improving existing pipelines as well as building new pipelines and LNG terminals to retain national control over the domestic energy transport infrastructure. However, in July 2009, the Commission made its first official warnings to 25 member states regarding failures to open internal gas and electricity markets fully by July 2007 based on the Second Gas Directive of 2003 (Hall, S. 2009).<sup>26</sup> In February 2010, in light of these anti-trust charges by the Commission, ENI agreed to sell off some of its shares in gas pipeline networks to end the Commission's inquiry on its case. However, ENI assets, particularly its shares in the TAG pipeline, which transports Russian gas from Austria and Germany into Italy and was defined as 'strategic' by the ENI's chief executive, will in his words 'probably be sold to an Italian state entity.'<sup>27</sup> Thus, while the company opted for selling its shares in other two pipelines (TENP and Transit) that transport gas from the North Sea, it preferred to transfer its strategic share in the TAG pipeline to the Italian government. Consequently, ENI's preference to sell its strategic share in a major international pipeline to a state entity demonstrates the persistent influence of ENI's institutionally embedded domestic market structure and its strategic partnership with Gazprom.

ENI has actually responded to transaction costs and external threat by retaining its historically dominant share in the domestic gas market while also consolidating its strategic partnership with Gazprom. With Gazprom, it has sought to develop joint projects in third countries and conduct joint activities in gas transportation, a legacy that has endured since founding President Enrico Mattei's first oil import deal with the Soviet Union in 1959 (Hayes 2006:56). This relationship spans both the downstream and upstream sectors of the oil and gas markets. The Blue Stream pipeline, which transports gas from Russia to Turkey via the Black Sea, and the South Stream, another sub-Black Sea gas pipeline to bring gas from Russia to Bulgaria, secure ENI's access to Russian gas and make it Gazprom's single largest corporate customer (Dempsey 2007; Baran 2008). Gazprom has gained direct access to the Italian gas retail market in return for granting ENI greater access to a number of joint upstream oil and gas projects (Michaels and Ostrovsky 2006). Under long-term contracts between Gazprom and Snam, the ENI subsidiary controlling pipeline transport network in Italy, ENI secured its dominant position while addressing the ex ante and ex post transaction costs entailed in Italy's reliance on imports for nearly a third of its total gas consumption (Dempsey 2006a, 2006b).

In August 2006, when Gazprom and Sonatrach, the Algerian state-owned gas company, agreed to work together in LNG and consider joint bids for third-country assets, the Italian government grew alarmed about Italy's dependence on imports from Algeria and Russia (Laitner and Limbach 2006). Although the Italian industry minister called for Commission leadership to ensure security of gas supplies, ENI has not measurably modified its deeply rooted strategic partnership with Gazprom. Italy has been seeking the Commission's support to finance energy infrastructure, arguing that the priority should be given to interconnections between EU member states (Iago 2009), because such a preference would be consistent with the government's deliberate policy aim to enhance national energy security by facilitating regional infrastructure, such as with North Africa and the Western Balkans, and transporting

ENI's international upstream gas production via the company's joint pipeline projects with Gazprom. While in June 2007 the company agreed to build South Stream to transport Russian gas to European markets, following the Russian-Ukrainian gas crisis in January 2009, Eni and Gazprom signed a contract in May 2009 to increase the capacity of this pipeline (Baran 2008, Shiryayevskaya and Rodova 2009).

Consequently, the Italian case demonstrated that when transaction costs are high but external threat is low, expected support for the internal energy market will be low, in line with the strategic preferences of a traditional CME-typical national industrial champion, which seeks to decrease levels of both ex ante transaction costs entailed in high import dependency and ex post and asset specific transaction costs in downstream energy sector, especially if the firm has a strategic partnership in upstream gas production and downstream international gas pipelines. Thus, our suggested model offers a better explanation for Italy's low level of support for the internal energy market.

### **4.3. The French case**

With low levels of energy import dependency (low transaction cost) and Russian gas imports in its total gas consumption (low external threat) coupled to its largest production of nuclear energy in the EU, the French case demonstrates the influence of the CME variety of capitalism (comparable to that found in Germany and Italy), as operationalized by the contextual variables of domestic market structure and international setting.

Nuclear energy, used to generate electricity, accounts for two fifths of France's primary energy supply. Oil is the largest imported energy source, followed by natural gas (European Commission 2007g). Gas and electricity markets in France have been liberalized for industrial consumers since July 2004, while household customers have been eligible to choose their supplier since July 2007. Although electricity and gas transmission system operators were legally unbundled, the gas market remains dominated by vertically integrated companies, primarily Gaz de France (GDF). GDF and Total accounted for 95 percent of gas imports, based largely on long-term contracts with national companies of exporting countries in 2007. In 2007, there were two transmission-system operators, GDF, which operated around 88% of the entire French transmission network, and Total. GDF also controlled 96% of gas distribution, with the remainder divided among 21 other companies in 2007 (European Commission 2007h). The French government has hesitated to break up gas and electricity markets in France since GDF and Electricité de France (EDF) are both state-controlled oligopolies. The French government's efforts to protect its energy sector became apparent when the Suez-GDF merger was approved in 2006, even after commencement of antitrust investigation by the EU Commission (Mortished 2006). Gas was at the heart of the merger, since Suez controls Belgium's Zeebrugge gas hub, a vital cross-border centre of the European gas network, particularly for the gas pipeline linking Britain to the continent, and site of Europe's largest LNG terminal.

GDF and EDF opposed the competition commissioner's proposals for 'unbundling'.<sup>28</sup> In the third energy package negotiation process, the French government's preferences for protection of its traditional national champions, such as GDF and EDF, were evident. French ambivalence towards the internal energy market has stemmed not only from the relatively low share of gas consumption in its energy supplies and its low share of Russian gas imports but also from a distinct set of state-society relations embedded in the French model of CME, as manifested in President Sarkozy's opposition to the Commission's commitment to full liberalisation of gas and electricity markets.

France gained notoriety when its national champions were bolstered by the merger between the privately owned electricity company Suez and national champion GDF. France's Europe minister was bold enough to call the proposals '... an ideological view. We have a strategic view. It is a better balance between European interests and competition rules. It is not an ownership problem. A (national) regulator that guarantees fair access to the market is a good method' (Bounds et al. 2007). Although energy was one of the four major priorities laid out by its EU Presidency in 2008, France maintained its opposition to any form of ownership unbundling and joined Germany and Italy to block the Council voting on the Commission's original proposal and to remove the 'Gazprom clause'. Furthermore, during the 6 months of its EU Presidency, French energy firms were not implicated in the Commission's anti-trust investigations.<sup>29</sup> However, in July 2009 GDF and German firm EON were fined for their 'anticompetitive market sharing agreement in breach of antitrust law'. Likewise, in light of the anti-trust cases against German and Italian energy firms, GDF also agreed to free up import gas capacities by about 10 percent in 2010-11 and by approximately 40 percent by 2024 at its LNG terminals (Montoir-de-Bretagne and Fos Cavaou) as well as at its gas entry points in France (Taisnières and Obergailbach) in order to satisfy the intent of the Commission's various anti-trust cases (Froley and Hall 2009, White 2009c).<sup>30</sup>

Nevertheless, these settlements following approval of the Third Gas Directive in its weaker compromise form reflect the impact of the French government's strategic interests in trading off between firms' interests in the EU nuclear market, regional electricity market and domestic downstream gas and electricity market. In fact, France aimed to take a leading role in discussions on nuclear energy when the Commission noted that a large number of nuclear power plants in EU would reach the end of their life-span before 2030.<sup>31</sup> Therefore, to the extent that French energy firms controlled ex ante transaction costs through their access to upstream domestic nuclear energy supply, they felt less external threat and were able to compete in domestic and regional energy markets given their historical quasi-monopoly position in domestic downstream gas and electricity markets. Similarly, given France's low level of energy import dependency, GDF has enjoyed more flexibility in the downstream gas market and has thus preferred to decrease ex ante costs via long-term contracts with Gazprom. While GDF imports from Gazprom about one quarter of France's gas, in December 2006, the long-term contract signed between GDF and Gazprom was extended to 2030 in return for Gazprom's obtaining the right to sell gas directly to French consumers (Dempsey 2006b). GDF will import this gas via the Nord Stream pipeline, while GDF was engaged in talks to

buy a 9 percent share in the pipeline in 2009. Moreover, in November 2009, EDF and Gazprom agreed to be partners in building the South Stream gas pipeline in which EDF will have 10 percent stake, joining ENI-Gazprom partnership in the project (Perrot 2009). Thus, French national champions, facing low transaction costs due their low energy import dependency, secured access to gas resources by a *long-term* contractual relationship and a partnership for a gas pipeline with Gazprom, not via market-based contractual relationship we would observe in LME.

In sum, our model explains the case of France by demonstrating how, despite a member state's comparatively low levels of energy import dependency and Russian gas imports, CME-contextualized domestic market structure and international settings can yield an ambivalent attitude towards the international energy market, but tending in a negative direction towards low support.

#### **4.4. The UK case**

Finally, the UK case allows us to examine how the LME variety of capitalism exemplified by the UK operates in shaping an EU member state's attitudes towards EU energy-market integration. The UK is the EU's largest producer of oil and gas, but its total domestic production began dropping after 2004, when the UK became a net energy importer for the first time since 1993. While the share of gas in primary energy supply grew 85 percent between 1990 and 2004 (European Commission 2007i), the UK's energy import dependency has remained significantly below the EU average.

The UK led on liberalisation of energy markets in Europe as early as the 1980s to facilitate competition and ensure efficiency in Britain's gas and electricity markets. The first step towards energy liberalisation came with the privatization of British Gas (BG) in 1986. Gas and electricity markets have been open to foreign competition since 1998, following the separation of BG's upstream division from its retail operations, which then came under the direction of Centrica. Thus, the British domestic market structure, embedded in distinctively liberal institutional settings, fostered a competitive energy market and predisposed firms towards market based contractual relationships with foreign energy suppliers.

The UK has one of the most competitive wholesale and retail markets. Gas and electricity transmission companies have been fully unbundled, while some distribution systems are still part of vertically integrated companies. There are foreign suppliers, such as GDF and multinational producers Shell, BP, and Total, in the downstream gas market. Despite the high level of competition in the overall gas market, three large suppliers accounted for three quarters of the retail gas market in 2007(European Commission 2007j).

The British government prioritized liberalisation of energy markets within the EU during its presidency in 2005. Several foreign utilities, including RWE and EON of Germany and EDF of France, operate in the wholesale and retail UK markets. As several foreign utilities

companies have been allowed to enter the British gas and electricity markets, UK companies such as Centrica, the owner of BG and Scottish Power, have criticized the slow pace of liberalisation of other EU member-state energy markets (Bream and Catan 2005). Furthermore, the importance of boosting import capacity by pipelines and storage was cited as a means of stabilizing inter-seasonal gas prices. In fact, Ofgem, the UK energy regulator, alerted the UK government to the issue of whether incumbent companies would opt to utilize existing and new capacity in pipelines from Europe (Bream 2006). Findings of a Commission investigation into the cause of low volumes of gas inflow to the UK in the winter of 2006 revealed ‘the need for more investments in cross-border networks and ... the importance of establishing transparent and well-functioning secondary markets’ (European Commission 2007b:89). Overall, new entrants have demanded most of the additional capacity in the most highly used transit pipelines in the EU gas market (European Commission 2007b:89).

In the UK, wholesale and retail gas companies rely on market mechanisms rather than on strategic partnerships to import gas. They are much less concerned about access to gas supplies, given their country’s relatively higher level of domestic output and lower gas-import dependency. Moreover, forced sales of British assets in Russia’s upstream sector to Gazprom--namely, the loss of shares owned by BP in the TNK-BP joint venture to develop the huge Kovykta field in eastern Siberia and those owned by Shell in the Sakhalin II project--have made incumbent companies wary of closer downstream business relations with Gazprom (Kramer 2007).<sup>32</sup> This wariness has been reinforced by Russia’s refusal to ratify the Energy Charter Treaty (and ancillary Transit Protocol), which entered into force in 1998. Thus, we observe neither many long-term contracts nor strategic relationships between UK firms and Gazprom.

In this context, the UK government has emphasized the importance of energy diversification so as to limit import dependency on Russia, while also encouraging UK utilities to generate nuclear power and ‘clean coal’ in addition to building more gas storage, the volume of which is lower than in many other gas-importing countries (Bream 2006). In other words, the UK government favoured market-based solutions, rather than hierarchical governance structures or national champions favoured in CMEs, to manage energy import dependency and curtail reliance on Russian gas imports. During the third energy package negotiation process the UK government strongly endorsed EU Commission efforts to increase competition and market openings, with a British government spokeswoman clearly stating that, ‘the UK will oppose anything which doesn’t provide for full energy liberalisation’ (Benoit et al. 2008). Furthermore, despite a report by the national energy regulator warning of a potential energy supply crisis in UK by 2015 which could happen because some coal-fired power stations would be abandoned, several nuclear reactors would end their life-spans, and long-term investment funds remain uncertain following the financial crisis of 2008, the British government maintained its strong support for liberalisation in gas and electricity markets (Milner and Macalister 2008). Similarly, the British government approved the deal between EDF and British Energy allowing the former to acquire eight nuclear plans of the latter firm, which could bring French nuclear expertise to Britain and to diversify it’s the UK’s energy

mix within the context of its LME-institutional predisposition to free movement of capital and market-based contractual relationships.<sup>33</sup>

Consequently, the UK case demonstrated that when there both transaction costs and external threat are low, expected support for the internal energy market will be high, in line with firms preferences endogenous to LMEs, in order to decrease high ex ante costs and asset specific costs in the energy market. Therefore, our suggested model offers a better explanation for the UK's high support to the EU internal energy market, when compared to firms in the CMEs of Germany, France and Italy.

## 5. Conclusion

As demonstrated above, our analytical framework explains divergence in preference formation towards the internal energy market according to the delineated contextual factors of domestic market structure and firms' international settings that intervene to cushion or amplify the impact of transaction costs and external threat. This study underscores the importance of local models of capitalism in preference formation vis-à-vis European integration, offering additional insights into the conditions under which national institutions have shaped firms' response to common external pressures in the energy market.

Despite agreements between the EU Commission and major vertically integrated energy companies to transfer some of their transmission networks to independent parties and free up gas storage and/or entry capacity to domestic energy markets in member states, liberalisation of the gas market following the Third Gas Directive in 2009 has disappointed some (EU Commissioner for Energy 2010).<sup>34</sup> Furthermore, in March 2010 the Commission's annual report to the Energy Council on progress towards creating the internal gas and electricity market underlined major violations, including 'insufficient coordination efforts by transmission system operators to make maximum interconnection capacity available and a lack of enforcement action by the competent authorities in member states' (European Commission 2010). Therefore, one particular challenge has been the slow pace of investment in vital gas infrastructure, such as the interconnection capacity and new cross-border transmission networks. Although the newly separated Directorate General for Energy aims to implement the third energy package fully and facilitate construction of new gas infrastructure (i.e. international pipelines and reversible interconnectors) via providing financial support under the European economic recovery plan, the internal gas market remains fragmented. Moreover, member states are divided in terms of committing to EU-wide binding institutions in energy, while sticking to their national policies to maximize their energy security within the context of national institutions.

Consequently, as argued herein, distinct national institutions allow divergent attitudes towards the internal energy market because domestic market structures and firms' international settings respond to transaction costs and external threat in the energy market within the

context of member states' traditional local models of capitalism, LME and CME. In other words, despite similar economic forces in member states' domestic energy markets and common external pressure by the Commission on all member states and their incumbent energy firms in the gas market, national policy responses and firms' preferences have differed owing to their distinct capitalist institutions.

As we have argued, in the dual institutional framework of EU-member state and firm interactions, VoC logic better explains preference *formation* towards the internal energy market. However, our argument does not suggest that the EU institutional context has no influence on preference *change* at EU-level negotiation dynamics, broad institutional context of European integration, and the political balance of domestic forces (Eising and Jabko 2001). For example, while the EU institutional setting had shaped member states' strategic approach to opening their domestic electricity markets (Eising 2002), liberalisation remains stunted in the electricity and gas markets of some member states. Similarly, the opportunities and constraints associated with the anti-trust investigation of the Commission and the decisions of the European Court of Justice are important in shaping strategies and preferences of firms and member states. However, we demonstrated in the case studies that the official representation of member states' and large energy firms' preferences remained constant during the 3<sup>rd</sup> Gas Directive negotiation process. In fact, in light of the anti-trust investigation of the Commission, we observed that, to the extent that vertically integrated large energy companies in Germany, France and Italy can control ex ante costs via use of their assets in major international gas pipelines and reliance on their strategic partnership with Gazprom or on their local energy sources (i.e. nuclear, coal or renewables), they may actually take advantage of liberalisation to acquire cross border utility networks to facilitate economies of scale or high market concentration in their downstream operations in order to decrease ex post and asset specific transaction costs. This observation is also important for research on the access of business interests to EU institutions during the policy making cycle in the EU. The observed opposition of vertically integrated large energy companies in Germany, France and Italy seems to be consistent with the empirical findings on large firms with high negotiation capacity and organizational resources having better access to policy making process at the EU level (Eising 2004 and 2007).

Within this framework, we acknowledge that the EU institutional context can generate changes in domestic policy preferences and interest group coalitions vis-à-vis the internal energy market. Since the 1992 Maastricht Treaty, the EU has expanded its regulatory compass over a broad range of issues, but notable exceptions remain, such as the energy market. Our findings address a major policy issue, the importance of mandatory infrastructure in the internal energy markets, particularly for cross border interconnections to ensure supply security (ex ante transaction costs) and to diminish firms' recurring ex post and asset specific transaction costs in the downstream distribution networks. Accordingly, progress on further liberalisation in gas and electricity markets may be constrained, since in light of the Third Gas Directive, transportation fees as the major revenues of the transmission system operators put them in a relatively weak financial position on which to build such key infrastructure. Thus,

given divergent preferences for integration of the internal energy market among member states, the EU Commission needs to mobilise mass public opinion to pressure national firms and governments in favour of the internal energy market and to build the necessary regional infrastructures.

It is important to note the methodological limitations inherent to our case studies, because these induce caution in making larger generalizations. Our argument may well be analytically specific to the energy sector and to the observed outcomes therein. We focused on preference formation of firms in the case of the internal energy market, arguing that the effect of transaction costs and external threat on shaping these attitudes are mediated and conditioned by domestic market structures and firms' international settings that arise within the local context of capitalism. Thus, our analytical framework and the empirical findings of case studies can constitute a benchmark for future research on the influence of EU institutional context as well as ideational forces (Checkel and Moravcsik 2001) on evolution of preferences and change in the official representation of firms and member states in the integration process in energy market, which can be considered as the least likely case given the high material and national interests specific to the sector.

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## Endnotes:

<sup>1</sup> As argued by Stein (1990: 183-184), we suggest that preference formation should be stipulated by 'strategic interaction as a level of analysis'.

<sup>2</sup> For example, the European Energy Treaty emphasizes the resolution 'to establish an integrated market in natural gas and electricity, based on common interest and solidarity', determination 'to create a single regulatory space for trade in gas and electricity' and 'to develop gas and electricity market competition' as well as the desire 'to enhance the security of supply of the single regulatory space by providing ...'. *Official Journal of the European Union*, 'The Energy Community Treaty', 20.7.2006, p. L198/18, L198/19.

Likewise, the Green Paper identifies number one priority as 'energy for growth and jobs in Europe: completing the internal European electricity and gas markets' and the second priority as 'an internal energy market that guarantees security of supply: solidarity between Member states' among the six priority areas to address the challenges of the EU in developing a European energy policy (European Commission 2006: 5).

<sup>3</sup> The EU derives its energy consumption 36.4% from oil, 23.9% from natural gas, 18.3% from solids (i.e. coal), 13.4% from nuclear, 7.8% from renewables, and 0.2 from other sources as of 2007. European Commission, Directorate-General for Energy and Transport, *EU Energy in Figures 2010*, 26.1.2010, p.10.

<sup>4</sup> 'Fight looms in Europe on energy proposals' *International Herald Tribune*, 19 June 2008.

<sup>5</sup> 'Energy ministers clinch deal on liberalization', *Euractiv.com*, 13 October 2008. Available at <http://www.euractiv.com/en/energy/energy-ministers-clinch-deal-liberalisation/article-176279>.

<sup>6</sup> Any such measures applied under the 'level playing field' article would have to be notified to the Commission, which could reject them. This article cannot be applied to a company with independent transmission operator (ITO) buying other ITOs or a supply company buying an ITO, if it remains as an ITO. But a company with an ITO or any interest in supply or production would not be allowed to buy ownership of an unbundled company (Hall, S. 2008).

<sup>7</sup> For example, some energy infrastructure would be exempt from unbundling to ease investment in priority projects, such as natural gas pipelines between EU member states or LNG and gas storage facilities. For details see Dreyer et al. (2010: 17-19).

<sup>8</sup> 'Unbundling is not a done deal', *Utility Week*, 22 May 2009.

<sup>9</sup> RWE and EON are also the largest electricity companies in addition to Vattenfall, and EnBW, which together accounted for 90 percent of national power-generation capacity, nearly the entire high-voltage transmission network, and about half of the retail market in 2007.

<sup>10</sup> 'EU confirm talks over German firm RWE's anti-trust case', *Deutsche Presse-Agentur*, 28 May 2008.

<sup>11</sup> EON was also alleged by the Commission for raising prices artificially by withholding generation capacity and preventing rivals from using its extra-high voltage distribution network in domestic electricity market (Wielgaard 2008c).

<sup>12</sup> For example, the deal gave EON an important market share in Spanish energy market as well as in Italy and France since EON bought power generating assets of Endesa in these countries. 'Endesa battle ends with 12bn pound asset deal', *Utility Week*, 4 April 2008.

<sup>13</sup> In July 2008, the European Court of Justice ruled that Spain's requirement for companies to get permission from the National Energy Commission was illegal and 'a restriction on the free movement of capital'. 'Spanish restrictions on energy takeover illegal: EU court', *Agence France Presse-English*, 17 July 2008.

<sup>14</sup> 'Deal or no deal?' *Utility Week*, 9 May 2008.

<sup>15</sup> 'EU says in talks with German power group RWE on settling anti-trust case', *Associated Press Worldstream*, 28 May 2008.

<sup>16</sup> 'RWE looking for strategic buyer for network', *Agence France Presse-English*, 1 June 2008.

<sup>17</sup> BASF subsidiary Wingas, together with Rohöl-Aufsuchungs Aktiengesellschaft (RAG) and Gazprom, own Central Europe's second largest natural gas storage facility, which has been in operation at Haidach, Austria since July 2007. Gazprom itself has a 35% stake in Wingas. <<http://www.wingas.de/632.html?&L=1>> accessed April 2008.

<sup>18</sup> 'RWE chosen for Nabucco natural gas pipeline project', *Turkish Daily News*, 31 January 2008.

<sup>19</sup> 'Merkel backs Russia gas pipeline projects', *Agence France Presse-English*, 29 January 2009; 'Germany opposes EU funding for Nabucco', *UPI energy*, 3 March 2009.

<sup>20</sup> *ENI's History* available at <[http://www.ENI.it/en\\_IT/company/history/the-steps/the-90s.shtml](http://www.ENI.it/en_IT/company/history/the-steps/the-90s.shtml)> accessed October 2008.

<sup>21</sup> 'ENI should transfer international gas pipelines to Snam RG-regulator', *AFX*, 21 September 2004.

<sup>22</sup> Ownership of the gas distribution network is highly fragmented, run by about 430 operators (as of January 2007). 'Italy energy regulator seeks gas improvements, merger of local distributors', *AFX*, 23 June 2005.

<sup>23</sup> TAG is ENI's unit carrying Russian gas to Italy via Austria. 'ENI's Russian gas pipeline capacity allocation queried by regulators', *AFX*, 12 April 2006.

<sup>24</sup> 'Italy energy regulator sets LNG regasification rules in face of ENI dominance', *AFX*, 2 August 2005.

<sup>25</sup> 'ENI CEO says Gazprom aim for infrastructure stake, talks to take time', *AFX*, 20 March 2006.

<sup>26</sup> Cyprus and Malta are excluded since neither uses gas and have isolated power systems.

<sup>27</sup> 'Italy's ENI to sell gas pipelines to assuage EU', *Agence France Presse-English*, 4 February 2010.

<sup>28</sup> 'GDF, Suez voice opposition to EU unbundling proposals', *Thomson Financial News*, 12 September 2007.

<sup>29</sup> 'French Presidency: Paris expects political agreement on energy package by year end' *Europe Energy (Europe Information Service)*, 25 June 2008.

<sup>30</sup> The French government also promised to reform its electricity market and allow competitors to buy electricity from nuclear power generation of EDF in order to avoid an investigation of the Commission about the illegal state aid to EDF. However, the Commission and the French government agreed that any rivals buying kilowatt-hours from EDF's nuclear power generation would have to sell it in the French domestic market given the EDF's and the government's argument for 'the French public should benefit from low nuclear power prices because France accepted construction of nuclear power plants when other countries in Europe rejected them' (MacLachlan 2009).

<sup>31</sup> 'Sarkozy stutters', *Utility Week*, 16 May 2008.

<sup>32</sup> Company Press Release, 22 June 2007. <<http://www.tnk-bp.com/press/releases/2007/6/70/>> accessed April 2008.

<sup>33</sup> 'EU puts conditions on EDF-British Energy link' *Associated Press Worldstream*, 22 December 2008

<sup>34</sup> For example, Gunther Oettinger, the EU Commissioner for Energy stated that 'Today, the powers and independence of national energy regulators across Europe differ considerably. Regrettably –in a number of countries they lack the powers to do their job properly. They are also often subject to political interference. ...' and 'Networks are a regulated business. Therefore national regulators have an ultimate say on investments. They do this on a national level, but many of investments we need now are cross-border and of shared benefit. In such cases we need more than a national view on investments. We need to understand the value of investments based on the European interest. Some of these investments are back-up for emergency and might not be provided for by the market. Therefore public funding may be required.' (European Commissioner for Energy 2010).