Journal of International Relations and Development
https://doi.org/10.1057/s41268-020-00184-x

ORIGINAL ARTICLE

Asymmetric interdependence and the politics of energy in Europe: Hirschman's 'influence effect' redux

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Abstract

In 1945, Albert Hirschman proposed that countries can use asymmetric trade relations as a weapon of political influence at the direct expense of the security of their trading partners. This paper argues that Hirschman's theory of asymmetric interdependence can be applied to the contemporary case of European-Russian gas relations given that Russia uses its monopoly on gas to promote its regional political and security interests. At the same time, we argue that Hirschman's concepts of 'supply effect' and 'influence effect' must be reevaluated in light of the deepening economic interdependence in European gas trade. By exploring three different types of dependent states, Ukraine, Bulgaria and Germany, we find that the interdependent network of trade relations in Europe, and the shared vulnerability and political influence of European gas importers, have weakened both types of economic statecraft. Yet, more indirect and diffuse forms of political influence are possible through forging ties of asymmetric interdependence.

Keywords asymmetric interdependence · EU · gas trade · influence effect · supply effect · Russia

Introduction

In 1945, Albert Hirschman proposed that countries can use asymmetric economic interdependence as a weapon of political influence at the direct expense of the security of their trading partners. In recent years, the trade relationship between Russia and its European neighbors over gas has provided a salient case to reconsider Hirschman's theory (1945) in a modern context. On the surface, Russia's willingness to control – or, in some cases, sever – the supply of its natural gas to its dependent

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Published online: 08 February 2020

European trading partners appears to be evidence of Russia's economic strategy to expand its political influence in the region and suggests that Hirschman's theory has contemporary applicability beyond Great Power politics during World War II. Deeper analysis into the politics of energy in European-Russian relations, however, reveals that globalisation and growing economic interdependence have reshaped the politics of dependent economic relations. While Russia still has significant market advantage, given Europe's dependence on Russian natural gas, globalisation has altered its ability to use trade as a political tool to be wielded against dependent countries.

For instance, during the 2014 conflict with Ukraine, Russia showed 'restraint at exercising the gas weapon' by cutting off supply only after a series of negotiations regarding Ukraine's mounting debt and pre-payments on future transit deliveries (Stulberg 2015: 113; see also Stulberg 2017). Such behaviour contrasted sharply with Russia's hasty decisions to halt gas deliveries in 2006 and 2009. On the other hand, vocal opposition efforts based on both environmental and political concerns were unable to halt the Nord Stream pipeline project, led by a Russian and German multilateral consortium. In December 2017, the Russian gas monopoly Gazprom announced that construction was moving forward on an extension of the pipeline via Nord Stream II and that it would likely be completed by 2019 (Subsea World News 2017). This latest step was taken, even in the face of renewed protests, including those from global leaders expressing concern for regional security as a result of the project. These two examples paint a complex picture of the ways in which Russia's economic – and political – influence is being restrained in some dimensions and realised in others.

What then are the effects of asymmetric trade on political relations between trading partners? Specifically, what are the regional security consequences of European dependence on Russian gas? Previous research has already explored how economic interdependence has led to greater conflict than cooperation, especially in the context of Russian-European gas relations (Özpek 2013). In this paper, we explore this premise by examining Hirschman's seminal study on the effects of asymmetric interdependence and economic means of political influence. Specifically, we build on his concepts of 'supply effect' and 'influence effect' and test their relevance in present-day Russia-European relations by exploring three different types of dependent states, Ukraine, Bulgaria and Germany. We find that an increasingly interdependent network of trade relations in Europe, and heightened awareness of the shared vulnerability and political influence among European gas importers, have altered Russia's options for economic statecraft.

Recent developments in the EU's energy strategy that promote trade liberalisation through the 2009 Third Energy Package, investment in energy efficiency through the European Energy Union, and diversification of supply demonstrate a burgeoning commitment among member states to combat supply threats through collective action rather than individual negotiations (Mayer 2008). At the same time, Russia has demonstrated its adaptability and resilience in its attempts to develop a stronger relationship with Germany via the Nord Stream II pipeline, thereby decreasing its reliance on Ukraine as a transit state. Russia has also cultivated pro-Russian or pro-pipeline clients in countries like Ukraine and Bulgaria and played off internal

divisions in German politics to push its Nord Stream II agenda. In sum, there is evidence of more indirect and diffuse forms of influence effects – a la Hirschman – that are made possible by ties forged through asymmetric interdependence.

Asymmetric interdependence and its consequences: how European dependence on Russian gas influences regional security

On the surface, the nature of Russian-European gas relations appears to closely replicate Hirschman's description of asymmetric trade given Russia's control over gas supply in Europe, particularly among Eastern European and former Commonwealth of Independent States (CIS) states. Since the mid-1990s, the Russian economy has revived itself largely owing to the resurgence and expansion of its gas industry. Within the past decade, the value of Russian gas exports to the rest of Europe has dramatically increased – from $31.7 billion USD in 2005 to $67.2 billion USD in 2013 (Holz et al. 2014: 7). The Russian Federation has the largest gas reserves in the world and produces the second largest amount of dry natural gas after the United States (Nord Stream 2 2017; EIA 2015). Approximately 63.3 percent of Russia's gas is produced by Gazprom, the partially state-owned gas company. The next largest producer, NOVATEK, accounts for 7.8 percent (Yakunina 2017). As the owner of the Unified Gas Supply System (UGSS) which controls Russia's natural gas production, transportation, storage, and supply, Gazprom has made it nearly impossible for independent gas companies in Russia to gain access to the state's pipelines (Holz et al. 2014: 14). Gazprom also wields significant influence in the production of gas outside of Russia, acting as a shareholder in many European gas industries, particularly in Eastern European countries (Holz et al. 2014: 19).

Natural gas accounts for approximately 22 percent of the EU's energy and is expected to rise to 28 percent by 2035. Meanwhile, production of gas in the region is expected to halve by 2035 from 2015 levels (Nord Stream 2 2017). European states rely on gas for various vital needs including 'heating, electricity generation and industry usage' (Holz et al. 2014: 2). Collectively, Europe imports a significant amount of its gas supply from Russia, although the extent to which an individual country relies on Russia for the majority of its supply varies by state and is largely based on proximity to Russian borders (see Table 1). There are three types of importers. First, countries in the former CIS, such as Ukraine, Belarus, and Moldova, rely on Russia to meet the majority of their respective demands. Second, Eastern European states import a limited amount of gas relative to Western and Central states but have a much less diverse supply and thus import most, if not all, of their gas from Russia (Goldthau 2008: 687). Finally, Western and Central European states such as the United Kingdom and Germany import a significant amount of gas to fuel their advanced industrial economies but have diverse supply lines and thus rely on Russia for only a limited portion of its total imports. For example, exports to Germany constitute the largest percentage of Russia's total exports; however, this figure accounts for only a small portion of Germany's total gas demand. In contrast, Bosnia and Herzegovina import 100 percent of its demand from Russia, but this figure represents only 0.1 percent of Russia's total exports (Orlov 2015: 494).

This distinction between the different types of importers is significant for two reasons. First, the higher reliance on Russian gas for their total imports, and the less diverse nature of their supply lines, makes Eastern European and former CIS states far more vulnerable to the transit costs of supply disruptions compared to the rest of Europe. Whereas Western and Central European states have the opportunity to offset the impacts of a potential disruption in Russian supply by increasing their imports from other sources, Eastern European and former CIS states face limited options. For a country that is entirely dependent on Russia for its gas supply, a conflict between the Russian Federation and another state that results in the shut-down of gas could potentially result in the complete loss of the country's supply.

Second, individual countries are subject to varying costs for their imports. Since the 1990s, Moscow has enforced a dual pricing system in which it regulates domestic gas prices at a significant discount to what Gazprom charges consumers in Europe (Orlov 2015, 2016, 2017; Henderson 2011; Spanjer 2007). As Holz explains, natural gas 'plays an outstanding role in Russian energy supply to what remains a highly inefficient energy system' (Holz et al. 2014: 9). According to figures from 2011, 'Russia used almost seven times as much energy for a unit of GDP than the EU average' (Holz et al. 2014: 10). By regulating domestic prices, the Russian government can ensure that Gazprom does not use its monopoly to overcharge highly dependent Russian consumers. Meanwhile, Gazprom is able to offset any loss in revenue by raising the cost for European consumers.

For example, in 2015, Russian consumers paid approximately 24 percent of the average netback export price charged to importers in Western Europe for Gazprom gas (Orlov 2017: 590). The difference in price is based, in part, on the fact that, geographical distance objectively increases expenses such as 'transport costs, taxes, and import duties' (Spanjer 2007: 2891). At the same time, other more subjective considerations are also at play, such as the belief that Western European countries, with their stronger economies, can afford to pay more and in cash payment rather than credit (Spanjer 2007: 2891). Likewise, a study by Nathalie Hinchey (2018) found a positive correlation between an importing country's level of dependence on Russian gas and the priced charged by Gazprom (see Fig. 1). In other words, Russia has taken advantage of countries that rely on Gazprom as their primary or sole source through higher prices more so than countries that have successfully diversified their supply options. Despite the advantages of dual pricing, Russia has attempted to liberalise the domestic market in recent years and increase prices to European levels in light of backlash regarding the dual pricing system during its accession to the World Trade Organization (WTO). Nevertheless, the Russian government has struggled to achieve these goals in the face of oil-indexed contracts, a movement to hub-based pricing in Europe, and the lack of investment in energy-saving innovation (Henderson 2011: 2).

Given this seeming asymmetric trade relationship between Gazprom and Europe, it is conventionally believed that Russia is able to take advantage of its importers' dependence on natural gas to promote its political interests in the region (Wilson and Popescu 2009: 318). Some have argued that Russia systematically used as leverage the energy dependence of other post-Soviet states in shaping their foreign policies (Drezner 1999). There is some evidence of Russia's intentional use of its economic

advantage for political influence. For example, immediately after the Cold War, Moscow subsidised gas sales to former Soviet countries as an inducement to maintain positive relations with Russia. Kremlin has also pursued more aggressive strategies of acquiring foreign gas distribution infrastructures or owning shares in the pipeline operating companies in neighbouring countries such as Ukraine and Belarus. In response to disputes over unpaid bills, Russia has turned off flows to Ukraine three times in the past decade. Russia has also sought to reassert its political dominance in Europe through a Russian Neighborhood Policy (RNP), in which Moscow can 'be the center of its own sphere of influence' by threatening supply disruptions in countries that do not comply with its interests (Wilson and Popescu 2009: 322). The fact that Gazprom is 51 percent publicly owned means that the Russian government has significant control over the company's affairs. Moscow and Gazprom together have incentives to influence the surrounding political environment and to promote pro-Russian sentiments in gas-importing countries. Russian officials, moreover, recognise that the more countries become dependent on Gazprom, the more devastating a disruption in gas supply could be. As the costs of supply disruptions increase for dependent countries, the more willing such countries will be to yield to the demands of the Russian state even if the demands are highly unfavourable such as dramatic price increases.

Yet, Russia's gas monopoly has not necessarily or directly translated into political influence. Evidence shows varying degrees of compliance with Russian demands among Eurasian states despite Russia's economic and geostrategic dominance in the post-Soviet space (Abdelal 2004: 108; D'Anieri 1999: 163). A closer look at the nature of Russian-European gas relations reveals that the effects of asymmetry are tempered by the deepening nature of economic interdependence. Increasing regional cooperation among EU member states has decreased the ability of states to use their monopoly to wield political influence by making it possible for dependent countries to diversify their demand and to collectively demand better market conditions. Russia depends on maintaining good relations with European markets as much as the EU depends on Gazprom to meet their demand. This raises the question of how deepening economic interdependence in European gas trade has altered economic means of political influence. In an attempt to answer this question, we examine here in particular Hirschman's theories of 'supply effect' and 'influence effect' and their contemporary relevance.

According to Hirschman, asymmetric trade threatens the security of a dependent state by giving one country the opportunity to increase its own strength at the direct expense of other countries that rely on it for resources. In *National Power and the Structure of Foreign Trade*, Hirschman (1945: 31) argued that when 'the conditions which make the interruption of trade [a] much graver concern to its [the supplying country's] trading partners than itself', the supplying country can use this opportunity to promote its interests by either directly threatening to cut off or weaken supply, if importing countries do not comply with its demands, or by indirectly influencing the dependent country's political environment in ways that are conducive to the supplier's goals. Hirschman called the former type of direct economic coercion 'supply effect' and the latter 'influence effect'. Whereas military warfare often comes with severe human and financial costs for both sides, 'economic warfare' poses limited

risks for the supplying country while offering significant gains by increasing the loyalty and obedience of the importing country which cannot afford to sever the partnership (ibid.: 15; see also Mastanduno 2000: 306).

In the latter, more indirect form of political influence, labelled 'influence effect', Hirschman noted that the dependent state becomes politically influenced not because of external pressure, but because of voluntary adoption; not because of economic deprivation from sanctions or severed trade, but because of economic benefits that accrue from the trade relationship. Economically based influence strategies can accrue a type of 'soft power' to the host country as 'states' interests evolve and are shaped by their economic relationships' (Kirshner 1998: 72–73; see also Knorr 1977; Baldwin 1985; Wong 2005; Segal 2007; van Bergeijk 2014). This notion is further developed in what Abdelal and Kirshner (1999/2000) call 'Hirschmanesque effects'. Influence is sought by fostering economic dependence, which is made possible since the 'pattern of international economic relations affects domestic politics, which in turn shapes national interests. This is always true but is most vivid in asymmetric relations, where the effects are typically large, visible, and almost wholly found within the smaller economy' (Abdelal and Kirshner 1999/2000: 120). The Hirschmanesque influence effect can be observed in two stages: first, the levels and dimensions of economic interdependence between two countries, and second, their effects on domestic policy preferences or debates. Economic dependence can alter the definition of national interest in a country by changing the balance of power among different domestic interest groups.

Recent works that deal with energy security – or lack thereof – in Europe have addressed both of these types of political economic influence. For example, Russia's dominance in the European gas market, and its clash with clients such as Ukraine, has been characterised in terms of Russia's geopolitical power and its historical presence in the security environments of its neighbours (Wallander and Legvold 2004: 2–9). In some ways echoing Hirschman's 'supply effect', this perspective would expect Russia to use its status as an 'energy superpower' as foreign policy leverage. That is, Russia could exploit its market advantage and aggressively pressure neighbouring countries to adopt more pro-Russian policies by actually cutting off supply or threatening to do so (Goldman 2008; Orban 2008; Rutland 2008).

Other studies of Russian energy politics, however, show that Western policymakers' deep concern about the EU's dependence on Russian gas supplies and the likelihood of Moscow's divide-and-rule tactics may be exaggerated. In reality, Moscow's ability to coerce its energy customers as an 'energy superpower' is constrained by financial and other environmental factors – such as its desire to secure long-term contracts in the EU market and dependence on Europe as major customers due to physical proximity (Aalto 2011). In other words, Moscow's desire for regional influence is often in competition with the profit motive of Gazprom and the Russian state (Aalto et al. 2014: 17). Some scholars take the profit-seeking argument even further and argue that increasing trade and interdependence between Russia and the EU have resulted in voluntary and reciprocal cooperation. The image of Russia created in the Western media as 'the aggressor in its energy relations' notwithstanding, 'Russia's role in Europe is likely to be characterized both by cooperation and by conflict' (Closson 2009: 89, 104).

At the very least, the emerging consensus seems to be that deepening regional economic interdependence and transnational pressures have reduced the power of Russia's 'energy weapon' (Van de Graaf and Colgan 2017: 1, Stulberg 2017, 2015). This is consistent with recent theoretical developments which suggest that claims of direct economic coercion and economically motivated regional security competition, including 'resource wars' over possession of oil reserves, have been somewhat overstated and not strongly supported by evidence (Colgan 2013). Russia itself appears to have switched course in terms of its influence strategies – from simple inducement or coercion to strategic manipulation. In accounting for these recent changes in Russian behaviour, Stulberg (2007) discusses the 'soft' dimensions of economic statecraft – the restructuring of a target's decision-making framework in the gas, oil, and nuclear sectors. Only 'when a state enjoys global market power in a specific energy sector, as well as operates within a clearly delineated regulatory system at home, it will be able to shape a target's decision-making context so that strategic compliance holds out more favorable prospects than noncompliance' (Stulberg 2007: 37).

While Stulberg (2007, 2015, 2017) illustrates such indirect forms of influence, others point out that 'there is no coherent energy security frame' in Russia (Aalto et al. 2014: 16) and that the Russian state is not a unified actor that can easily mobilise and use its energy weapon at a time and place of its choosing, without short-term and long-term costs to itself. According to Aalto et al., the January 2006 'gas war' between Russia and Ukraine demonstrated to all of Europe their collective energy insecurity. Gazprom's decisions during the Nord Stream project also reflected the business frame and its need for the European market (Aalto et al. 2014). Russia has been keen to improve market security, given its financial losses during its past disputes with Ukraine and Belarus (Aalto et al. 2014: 14–15).

Moreover, influence can be multi-directional, resulting in a situation of asymmetric trade but also mutual vulnerability. Globalisation and increasing economic interdependence have altered the ability for dominant states to promote their political interests via economic means. In the 1940s, when Hirschman first proposed his theories, national economies were overall more self-sufficient and trade relations between countries more asymmetric. In the postwar period, and particularly with the rise of transnational corporations and the emergence of newly developing economies, there has been an increase in the size of the global market and the level of economic interdependence among countries. As the global market becomes more interconnected, the ability for supplying states like Russia to use asymmetric trade as a political weapon is tempered by the increased ability of dependent states to diversify their demand and to collectively raise the political consequences of economic disruption caused by the supplying state.

These changes have altered the ability of supplying countries to wield their economic power in two ways. First, as new industries have emerged throughout the world, the ability of one country to act as a monopoly has decreased. If country A, the supplier, acts in ways that country B feels are detrimental to its interests, country B has the ability to redirect its demand to a new supplier. Earlier research supports this idea that seeking 'alternative interdependencies' helps dependent states to 'avert the political consequences of asymmetric relations' (Özpek 2013: 6). The EU's

plans to liberalise the regional gas environment and introduce new market players under the Third Energy Package (TEP) is noteworthy in this respect. While not fully realised, the TEP seeks 'to make the energy market fully effective and to create a single EU gas and electricity market' in order to 'keep prices as low as possible and increase standards of service and security of supply' (European Commission 2011). As a key to these goals, the TEP introduces wider regulation and oversight into the market, specifically through the unbundling provision. Under this provision, ownership and management of networks must be separate. This type of structure directly contrasts with the vertical integration model where a 'company operates in the whole energy value chain comprised of production ("upstream"), transportation ("midstream") and distribution ("downstream") of energy' (Pick 2012: 330).

Outside of Europe, the EU has taken advantage of the expanding global gas market by building relationships with foreign suppliers and investing transcontinental pipelines (Bilgin 2009). The EU has made progress on its commitment to open the Southern Corridor and increase its imports from the Middle East and the Caspian Sea region. The United States is also playing a key role by supplying the region with liquified natural gas (LNG) to offset its dependence on cross-border pipelines. The loss of EU clients would be detrimental to Russia as the European market makes up the bulk of its exports. Moreover, for Gazprom, under the policy of dual-pricing, the inflated prices paid by Western European importers make up for profits lost in sales to the Russian domestic market.

Second, globalisation makes supplying countries more vulnerable to international criticism and increases their incentives for maintaining a positive reputation as trustworthy suppliers. Countries that constantly disrupt supply for political reasons are likely to lose credibility in the international market and face repercussions such as economic sanctions and severing of trade. The backlash of the 2014 crisis with Ukraine is evidence of the dangers Russia faces if it overuses its monopoly on gas to assert its political goals. Reprimanding Russian actions that they perceived as undue aggression against Ukraine, the United States and the EU imposed sanctions on Russia (Ewing and Baker 2014). In contrast to the expected mechanism of the supply effect, where dependence is advantageous for the producing country because the costs of limiting trade are higher for the importing side, in this situation, both Russian and European security were undermined due to the disruption of gas supply.

Putin's rerouting of the South Stream pipeline through Turkey, rather than Bulgaria, provides a salient example of Russia's growing vulnerability to pressure from the international community, including the EU and the United States. The dramatic revision of the project has been described as a 'rare diplomatic defeat' for Putin with severe immediate costs for the Russian economy as well as negative long-term prospects for the future of Russia's gas industry and its neighbourhood policy (Roth 2014). The decision to reroute the project not only set the country back $4.5 billion dollars of what it had already invested in terms of planning and construction expenditures but it also limited Gazprom's attempts to extend its influence in the region.

Russia's growing concerns about its market reputation and political backlash demonstrate this reconfigured interdependence. The Russian government is heavily dependent on hydrocarbon revenues to keep the state afloat. Stopping or drastically

reducing exports to Europe would hurt Russia in the long run. In addition, major energy projects often need the funding of transnational consortia, who in turn are dependent on their home state's export credit, development agencies and international financial institutions (Aalto et al. 2014: 9). Russia is also dependent on transit countries like Ukraine to supply gas to its European clients. At the same time, many European economies remain, to varying degrees, overwhelmingly dependent on Russian gas. As described by John Haines:

> The extraordinary high fixed cost associated with constructing energy pipelines gives enterprises like Russia's Gazprom substantial monopoly power. But pipeline owners are subject to a key vulnerability – political disruption – since the independent states these pipelines transit can block gas flow or siphon off gas for their own use. On the other hand, transit countries have a robust self-interest to ensure the steady, secure flow of gas for both domestic consumption purposes and for the revenue they receive in the form of transit fees. This condition creates what is called an 'asymmetric structure of interdependence'. It is asymmetric because no transit country can unilaterally impose significant costs on the supplier, even in the long run, since a transit country's only economic lever is non-payment (Haines 2015: 568–69).

Such asymmetric interdependence in the gas trade between Russia and Europe has made the threat or actual use of supply disruptions, and the expected 'supply effect' more costly for both suppliers and importers of gas. At the same time, asymmetric interdependence has not obviated the 'influence effect' but rather highlights its renewed importance. While direct evidence of changing domestic policy preferences has been complicated by the increasing diversity of actors in energy policy (Aalto et al. 2014), we illustrate how prolonged economic dependence has newly empowered specific domestic economic and political actors that seek to influence their country's energy policy. As Balmaceda (2013) has shown in her study of post-Soviet era Ukraine, Belarus, and Lithuania, asymmetries of interdependence have created multiple powerful transnational business interests that change the domestic political balance of power.

We build on this research by distinguishing between the reconfigured, albeit declining, forms of Russian power in three different types of European countries beyond the post-Soviet republics. Specifically, we find that while asymmetric interdependence has weakened the 'supply effect', the 'influence effect' remains supported by evidence. We argue that European dependence on Russian gas creates a complex web of asymmetric interdependence, in which both the dependent and dependence-promoting parties become vulnerable to mutual political influence. The cases of Ukraine, Bulgaria, and Germany demonstrate how Russia – via the mechanism of Hirschmanesque political influence effects – has been successful in using its monopoly over the European gas market to increase its regional security influence. While each country varies in its level and degree of dependence on Russian gas, all three cases show that Russia's attempts at direct economic coercion have become less salient and effective, with increasing diversification and interdependence of the European market. Yet, evidence suggests that asymmetric interdependence

continues to strengthen pro-Russian voices, or at the very least reconfigure the balance of power in dependent countries.

Recasting Hirschman's influence effect

Ukraine

In recent years, disputes between Ukraine and Gazprom over gas prices have resulted in Russia cutting off Ukrainian supply in 2006, 2009, and 2014. The Ukraine-Russia relationship exemplifies asymmetric interdependence for two important reasons. First, Ukraine relies on Russian gas for a significant portion of its gas with imports from the Federation accounting for 62 percent (in 2012) of its total demand (Holz et al. 2014: 3). Thus, loss of supply from Russia will have greater costs on Ukrainian economic security compared to other western European countries like Germany which has a more diverse supply and is, thereby, less dependent on any one provider. At the same time, Ukraine is Russia's second largest consumer of gas, accounting for 15.1 percent of Russia's total share in the EU, just behind Germany at 15.3 percent (Orlov 2015: 494). As will be discussed later in this section, Russia has, in recent years, exploited Ukraine's lack of diversification by raising gas prices above those paid by Western consumers.

Second, and arguably more importantly, Ukraine is a major transit location, meaning that much of the gas that flows from Russia to other countries in Europe passes through Ukraine (Clarke 2014). Approximately 60 percent of the gas Europe imports from Russia flows through Ukraine with the percentage historically as high as 80 percent prior to the Nord Stream pipeline (Spanjer 2007: 2890; Institute for Energy Research 2014). In 2013, the gas that flowed from Russia through Ukraine accounted for 16 percent of Europe's total gas usage (Institute for Energy Research 2014). With Ukraine serving as an intermediary for many of Russia's pipelines to Western Europe, supply disruptions imposed against Ukraine create a domino effect, limiting the ability of all receiving countries in Europe to secure the supply that meets their demand. For example, in addition to Ukraine losing over half of its gas supply during the 2006 disruption, 'Gazprom's gas supply to France decreased by 25–30%; supply to Austria decreased by 33%; and Italy received approximately 25 % less gas than normal' (Spanjer 2007: 2889). Bulgaria, one of the most dependent European countries on Russian gas was 'left shivering for two weeks' as a result of the second supply disruption in the winter of 2009 (Yardley and Becker 2014). These high transit costs associated with such supply disruptions suggest that Ukraine's political vulnerability is shared by its European neighbours. At the same time, it means that Russia too is vulnerable due to these asymmetrically interdependent relationships. It faces severe economic and political costs in the form of lost gas revenue and future political backlash.

The supply disruptions in 2006, 2009, and 2014 demonstrate the waning ability and willingness of Russia to wield the 'supply effect' weapon in dependent countries. Each conflict stemmed from ongoing disputes over pricing, debt, and Ukraine's alleged 'siphoning off supplies' intended for other European markets

(Pipeline and Gas Journal 2014: 24). However, whereas in 2006 and 2009 Russia was quick to put Ukraine in its place through supply disruptions, it showed much greater restraint in 2014 (Stulberg 2015: 112, 2017: 73; Van de Graaf and Colgan 2017: 61). The crisis in 2006 centred on pricing. Russia sought to raise Ukrainian prices on a par with other European countries, arguing that Ukraine had paid the same nominal price for Russian gas imports since 1998. The Ukrainian government, on the other hand, countered that the transit fees it received were too low and needed to be raised. After both sides failed to reach an agreement, Russia turned off supply for three days. Under the new terms, the transit fees Ukraine received would remain unchanged for another three years, while the import prices it paid rose each year (Balmaceda 2013: 127).

By 2008, Ukraine's debt to Gazprom amounted to $1.3 billion, according to Ukrainian reports, or $2.4 billion, by Russian estimates. At the same time, Ukraine was still paying a lower price compared to other European countries. These factors, coupled with projected decreases in Gazprom's overall revenue, motivated Russia to push for more favourable trade terms. Political instability in Ukraine stemming from a stand-off between President Viktor Yushchenko and Prime Minister Yulia Tymoshenko left the country 'virtually paralyzed' in dealing with energy policy and Russian demands (Balmaceda 2013: 132). After a two week shut-off, the countries reached a decision whereby contracts were subject to 'significant immediate gas price hikes' using a base price that exceeded the amount paid by many other European consumers. Ukraine was also forced into 'take-or-pay' agreements and would face 'heavy penalties' if it failed to pay on time (ibid.: 134). Ukraine's clear loss in these negotiations deepened the division between the president and the prime minister and amplified public frustration with the government. Thus, in both 2006 and 2009, Russia successfully promoted its political and economic objectives by exploiting Ukrainian dependence.

In contrast, Russia was more conservative in its economic coercion efforts in 2014. In late 2013, Putin even reduced the upcoming first quarter prices in Ukraine from 485.50 per tcm to 268.50 per tcm and issued $5.5. billion upfront to cover transit fees in 2014 (Stulberg 2015: 118). Only after months of failed negotiations did Russia cut supply in June 2014. However, even then 'Moscow left the door open for compromise by consistently offering future price discounts, once a partial debt repayment was received and fixed price terms were agreed for future contracts' (ibid.: 119). With winter approaching, Russia ended the shut off in late October and agreed to a temporary deal, despite the fact that Ukraine had $2.2 billion remaining in debt (ibid.). According to Stulberg (ibid.: 113), this change in strategy is due to the fact that the 2014 crisis 'transpired with the simultaneous emergence of a regional gas network […] marked by the integration of diverse cross-border pipelines, multidirectional interconnectors, LNG terminals, gas storage facilities, and inter-organizational relations'. By 2013, the economic and reputational costs to Russia of using its gas supply as an economic weapon were increasingly apparent. Economically, cutting off supply to a transit country meant that Russia shut itself off from its consumers in the West. The 2009 disruption resulted in a $1 billion loss in 'uncollected export revenues' (ibid.: 117). More significantly, the ripple effects of Russia's actions in Ukraine in 2006 and 2009 decreased the rest of Europe's

confidence in Gazprom's trustworthiness and heightened incentives to reduce the region's reliance on Russian gas. European efforts to diversify supply included building new partnerships in the Middle East, Asia, and the US, investing in renewables, and strengthening regional cooperation and interdependence. For Ukraine, in particular, the revised and highly unfavourable contracts following 2009 created 'for the first time in the [country's] history […] a clear economic incentive for a reduction in energy imports from Russia' (Balmaceda 2013: 148). Thus, the power of the 'supply effect' was significantly reduced in two ways. First, Russia had to tread more cautiously to maintain its reputation as a reliable gas supplier. Second, diversification made European consumers less vulnerable to supply disruptions as they could get their energy from other sources.

Although supply diversification among European consumers and increased likelihood of backlash may have reigned in Moscow's instincts toward direct economic coercion via the 'supply effect', asymmetric interdependence still allows for more indirect forms of economic and political influence. While Ukraine has not always followed the political dictates of Moscow, it has not been immune to the political consequences of economic dependence on Russia. By offering price discounts on gas, Russia has been particularly successful in exerting its economic and political interests in Ukraine. For example, in 2010, Russia secured a 25-year expansion on the lease it held on its naval base in Crimea by providing a significant cut in pricing on the 2009 contract (Van de Graaf and Colgan 2017: 5). Then, in the lead up to the 2014 crisis, Ukraine was in in talks with the EU to sign an association agreement which would have strengthened its trade and political ties with the West. By tempting Ukraine with a 33 percent price reduction and loans up to $15 billion, Moscow undermined the deal, saving itself from the loss of a key trade and political network (Van de Graaf and Colgan 2017: 5; Pifer 2014).

Notably, and consistent with what Hirschman predicted in his description of the 'influence effect', Moscow's success in these instances came not only from Russian pressure but also from the major political figures in Ukraine. While Ukraine's economic dependence on Russia has not translated directly into pro-Russian policies, it is worth noting that economic and political initiatives promoting greater autonomy from Russia have been strongly countered by different groups within Ukraine that benefit from, and see value in, maintaining stable political-economic relations with Russia. As observed by Abdelal and Kirsher (1999/2000: 154), 'although Russia was unable to coerce Ukraine on specific policies, it was able to prevent Ukraine from going the way of the Baltic republics, which are exiting the Russian sphere of influence and integrating with the European Union'. Nor has Kiev, despite the very public overtures to the European Union and NATO, decreased economic cooperation with Russia or opted out of Russia's neighbourhood policy regardless of recurring frictions in the past two decades (Smolansky 1995). Significantly, Ukraine remains politically divided, despite Russia's recent annexation of Crimea and the current standoff vis-à-vis Russia in eastern Ukraine. As Vsevolod Samokhvalov (2015: 1390–91) observes, 'although there is a growing popularity of NATO among the broader Ukrainian public, it is still a relative minority'.

Moreover, because of Ukraine's dualistic status as an energy-poor but rent-rich country, Russia has been able to cultivate long-term ties with specific interest groups

in the Ukraine who stand to benefit from continued energy dependence. Even though energy dependence has exacerbated the political and economic turmoil in post-Cold War Ukraine, evidenced by its declining GDP, hyperinflation, and a corrupt, clientelist presidential system, there are subgroups within the Ukrainian political economy who profit from subsidised Russian gas prices as well as from the revenue from transit fees. For example, in 2008, Ukraine's state-owned gas and oil company, Naz Naftohaz, received approximately 90 percent of its hard currency through transit fees (Balmaceda 2013: 132).

In addition, a 'balancing system' between the president and energy interest groups (known as BAGs, or business-administrative groups) ensures the latter's heavy involvement in the energy policy-making process. Under this system, gas companies receive energy rents, such as being able to push their non-payments to Gazprom onto the state, in return for political support for the president. Externally, rent-seeking measures have included cost arbitrage, where companies import supply at the lower Ukrainian price and then resell it to higher paying customers in the European market, and the siphoning of supply *en route* from Russia to other consumers in the region (Balmaceda 2013: 108–11). In 2000, Ukrainian companies allegedly stole and reexported 10 bcm of Gazprom gas to consumers in Hungary and Poland (ibid.: 108). Then, in March 2014, Russia accused Ukraine of incurring a $1.5 billion outstanding debt to Russia (Pipeline and Gas Journal 2014: 24). During a meeting that same year, Russian Prime Minister Dmitry Medvedev and Gazprom Chairman Alexey Miller discussed how Ukraine's failure to pay for its gas was negatively affecting Gazprom's current and future revenues.

Furthermore, asymmetric interdependence has led to perverse policy decisions that benefit the Ukrainian gas industry at the expense of the rest of Ukrainian society. For instance, the Odesa-Brody pipeline was an attempt to diversify Ukraine's energy supply and decrease its dependence on Russia, but it was ultimately overruled by the oligarchy, who did not want to jeopardise their monopoly access to current and future rents by severing pre-existing ties with the Ukrainian and Russian governments. As a result, the Odessa-Brody pipeline, originally constructed to import oil from the Caspian Sea, ultimately ran in the opposite direction so that supply flowed from Russia. For the oligarchs, this arrangement offered short-term benefits including 'immediate cash payments and higher transit fees' (Balmaceda 2013: 120). This decision was detrimental to the long-term interests of Ukraine, since 'reversing the pipeline made little economic sense' for the country overall and came with 'very serious long-term implications both in terms of Ukraine's energy security, other transit comments, and broader relationships with both Russian and Western institutions' (ibid.). In sum, the condition of asymmetric interdependence continues to enrich the narrow interests of the Ukrainian gas industry and promotes the economic and political interests of Moscow by preventing political decisions in Ukraine toward diversification.

Bulgaria

Bulgaria is one of the European countries most dependent on Russia for its gas supply. As of December 2014, Bulgaria imported approximately 90 percent of its gas from Russia. Bulgaria is also particularly vulnerable to transit costs given the fact that its gas flows from Russia via Ukrainian pipelines. Thus, during the 2006, 2009, and 2014 Ukraine-Russia conflicts, Bulgaria also lost access to its gas supply (Yardley and Becker 2014). Russia has been able to take advantage of this long-standing asymmetric relationship to influence Bulgarian domestic politics and foreign relations. For most of its modern history, Bulgarian relations with Russia have been characterised by political and economic dependence, dating back to Russian military support of Bulgarian revolutionaries' struggle for independence from the Ottoman rule in the late nineteenth century and Bulgaria's status as a member of the Warsaw Pact and satellite state of the Soviet Union during the Cold War (Sadikov 2008: 92). The two countries also share cultural affinity as predominantly Slavic nations (Davydenko 2014: 250).

In the post-Cold War period, Bulgaria's continued economic dependence made the smaller country vulnerable to the threat of Russia exerting political influence on its neighbours' policies. One such attempt by Russia to use and extend its economic and political influence has been the South Stream pipeline project. With construction commencing in 2012, the South Stream pipeline was described as 'Mr. Putin's most important European project' and 'a tool of economic and geopolitical power critical to [the Federation's] twin goals [of] […] keeping Europe hooked on Russian gas, and further entrenching Russian influence in fragile former Soviet satellite states as part of a broader effort to undermine European unity' (Yardley and Becker 2014). The South Stream pipeline not only sought to increase Russian presence in eastern Europe but also to extend its reach to countries like Germany and Italy where higher prices from the policy of dual-pricing would greatly increase Russian gas revenue. Such expansion of Russian influence in the region threatened to undermine the EU's attempts to decrease its reliance on Gazprom imports and diversify its demand by looking to other markets in the Middle East and the Caspian Sea region (Roth 2014).

As previously argued, however, Russia's dependence on the EU market, including Bulgaria, has created a situation of asymmetric interdependence, in which Moscow's attempts at direct economic coercion have been muted in its effects. For example, in November 2014, the Bulgarian government announced that it would support the EU decision to keep the South Stream pipeline proposal open to other suppliers, not just Gazprom. Bulgaria also stated that it would revive its formerly suspended construction on the South Stream pipeline *only* under the strict condition that Russia promise to obey EU open-market regulation (Novinite 2014). This reversal of policy, from Bulgaria's previous position of unconditional support for the Russia-led South Stream pipeline project, took place despite the threat of reprisal from Moscow. Previously, Putin had allegedly warned European Commission president Jose Manuel Barroso that 'if I hear one more word about competition, I'm going to freeze your you-know-whats off' after being told to keep the pipeline open to other suppliers (Yardley and Becker 2014). In April 2014, just days after its invasion of Crimea, Russia also sent Aleksandr Babakov, a member of the Duma, as a special envoy to

meet with Bulgarian deputy energy minister Bojan Stoyanov, who had expressed scepticism toward the project.

Bulgaria's final decision on the South Stream project seems to indicate the declining ability of the Russian Federation to make use of asymmetric trade as a political weapon even vis-à-vis its most dependent states and likeliest targets of external political influence. Similar to the Ukrainian case, Bulgaria's integration into an interdependent web of gas trade in the region has diluted Russian attempts at economic coercion, given that Russian actions affect not only the intended targets but the broader European market. As a result, the magnitude of possible 'supply effects' can be extended to multiple countries, prompting an unintended regional or global backlash. In this way, direct and indirect pressure from the EU may have ultimately forced the shelving of the original South Stream vision in December 2014, which led to the rerouting of the pipeline to Turkey, despite Gazprom having already invested $4.5 billion dollars in the project (Roth 2014).

At the same time, traces of the 'influence effect' remain in Bulgaria. Bulgaria's heavy reliance on Russian gas, in particular, has created a strong pro-Russia coalition within Bulgarian politics which sees great value in maintaining a stable relationship with Russia and lobbies the Bulgarian government to support policies that will advance and secure this partnership. The extent of Russian influence is evidenced in the Bulgarian government's recent ban on fracking. Shortly after the Bulgarian government granted a permit to Chevron to explore the country's shale gas reserves in 2011, a strong anti-fracking movement emerged. The movement was led by Volen Siderov whose 'undeniably close ties to the Kremlin' had resulted in the Russian Federation awarding him 'the Fatherland Star medal for promoting closer relations between Russia and Bulgaria' (Yardley and Becker 2014). Siderov's lobbying efforts on behalf of the Russian Federation led the Bulgarian Parliament to ban 'not only the extraction of shale gas, but even exploration that would quantify the country's reserves' (Yardley and Becker 2014). The ban on fracking deepens the asymmetric relationship between the two countries in two ways and undermines Bulgarian economic interests and capacity for industrial advancement. From the Bulgarian perspective, one potential economic benefit of utilising the shale gas reserves within its borders was the possibility of becoming more self-sufficient in its source of energy and thus decreasing its reliance on imported gas. Another benefit that was discussed was the increased likelihood of attracting more foreign investment from companies like Chevron, looking for new gas reserves.

Further scrutiny of the 2014 decision to reverse support for Russia also illustrates the Hirschmanesque influence effect at work. Despite the outcome in 2014, it is worth noting that between 2012 and 2014, Bulgaria backed Russian president Vladimir Putin's vision to create a new pipeline in southern Europe despite the likely negative costs to regional security. Its desire to solidify its membership notwithstanding, pressure from Russia has at times forced Bulgaria to act in ways that have been met with disapproval and criticism from other EU members. For example, despite widespread opposition within the EU to the South Stream pipeline proposal and the potential for deepening Gazprom's influence in Bulgarian and regional economic security, Bulgaria's long-standing dependence on Russia created powerful

incentives for the Bulgarian government to publicly announce its support for the project.

Like most EU members, many in Bulgaria feared the consequences of the South Stream pipeline for regional security. As previously mentioned, the scepticism of Bulgarian deputy energy minister, Bojan Stoyanov, to the pipeline was said to have 'mirrored that of officials in Brussels'. Stoyanov also supported the EU's demands that Russia allow producers other than Gazprom to use to pipeline as a way to 'safeguard against overreliance' on the monopoly (Yardley and Becker 2014). Yet, the combination of a strong pro-Russian coalition in Bulgaria and fear of future disruption of gas supply led Stoyanov and other Bulgarian politicians to overlook their initial scepticism and support the pipeline. In spring 2014, the Bulgarian parliament passed a bill formally endorsing the Russian Federation's right to pursue the South Stream, allowing Putin to proceed with his plans without having to comply with EU demands for keeping the pipeline open to outside competitors. The bill generated criticism both within Bulgaria and the EU, not only on the heavy-handedness of Russia's approach but also on the strong support lent to Russia by Bulgarian industrialists in a seeming breach of national security.

The examples of the ban on shale gas and the initial bill supporting the South Stream thus demonstrate how asymmetric interdependence results in more diffuse, but very real, modern-day Hirschmanesque influence effects. In other words, dependence on Russian gas has reconfigured domestic political interests in Bulgaria to produce otherwise unlikely or undesirable outcomes, such as support for domestic legislation that furthers Russian interest and comes at severe costs to domestic and regional security.

Germany

Unlike Ukraine and Bulgaria, Germany has more flexibility in where it sources its gas demand. In addition to Russia, it also has suppliers in Norway, Belgium, the UK, and the Netherlands (Zha and Shiryaevskaya 2017). Likewise, the government is looking to invest in LNG as part of Merkel's goal for 'further diversification of gas supply – whether from different regions or means of transporting gas' (Shiryaevskaya and Parkin 2018). Nevertheless, Russia's proximity to Germany (compared to the United States and the Middle East) and its natural monopoly over gas have long made it indispensable partner. As markets in the UK and the Netherlands start to decline and Germany tries to develop its own LNG industry 'basically from scratch', Russia will undoubtedly remain a very important source of supply (Shiryaevskaya and Parkin 2018).

Historically, both Russia and Germany have benefitted from their strong gas trade. Germany has long been the top consumer of Russian gas within the EU. In 2017, it imported approximately 60 percent of its natural gas from Russia (Shiryaevskaya and Parkin 2018). This figure is expected to rise in the coming years as Germany looks to become a regional leader in promoting energy efficiency. Chancellor Angela Merkel, a champion of transnational cooperation on environmental issues since the Kyoto Protocol (1992), pledged to 'gather all our strength – in

Germany, in Europe and in the world – to meet the great challenges of humanity, like climate change, and to successfully master these challenges' (Smale 2017). In the long term, Germany is working to fuel 80 percent of its electricity through wind and solar power by 2050. Meanwhile, in the short term, natural gas has become an important substitute for less efficient coal (Zha and Shiryaevskaya 2017).

The collaboration between Russian and Germany over the Nord Stream II pipe reinforces this partnership in light of changing conditions in the regional gas market. The Nord Stream II pipeline will start in Siberia and run alongside Nord Stream I to its destination at Greifswald port in Germany (see Fig. 2). Whereas Nord Stream I supplies 43.8 bcm of gas to Europe, Nord Stream II is projected to deliver an additional 55 bcm. European consumers can also expect lower prices and increased reliability of supply along with the creation of approximately 31,000 new jobs servicing the pipeline. The 10.6 billion-dollar (USD) project, scheduled to be running by 2019, is a collaboration between Gazprom and energy companies from Germany, Austria, France, and the Netherlands (Newman 2018: 39).

With Nord Stream I operating below full capacity and an abundance of other suppliers in Asia and the Middle East, critics question the need for Nord Stream II from a supply and demand standpoint. Nevertheless, for Russia and Germany, 'the geopolitical case for NS2 is strong' (Newman 2018: 40). As European consumers look to diversify their options beyond Gazprom-controlled pipelines, Russia's market power is certainly in jeopardy. The growing political and economic costs of using Ukraine as a transit location add further to this dilemma. With Ukraine, Russia has not only had to deal with the country's mounting debts and demands for reduced pricing; it also lost access to European markets and incurred sanctions and damage to its reputation as a reliable supplier when it cut off supplies during earlier crises. Despite these setbacks, Nord Stream II demonstrates Russia's adaptability to these new conditions, proving that it may be 'down but not out' in the European market (Stulberg 2015: 112). Nord Stream II is expected to increase Russia's presence in the EU market from around 34 to 40 percent (Newman 2018: 39). More importantly, by going through Germany, Russia can bypass Ukraine as part of its attempts to phase the transit country out over time (De Maio 2016: 4; Zha and Shiryaevskaya 2017). From the perspective of Germany, it benefits from lower costs and increased supply and reliability for consumers. Nord Stream II comes at a time when gas markets in the UK and Netherlands are declining. The pipeline, therefore, gives Germany an opportunity to become the new destination for the region's gas trade (Zha and Shiryaevskaya 2017; Shiryaevskaya and Parkin 2018; Newman 2018). Thus, for both countries, 'Nord Stream 2 isn't only about meeting additional demand, it's also about adjusting gas supplies towards the most cost-efficient routes' according to their own national interests (Zha and Shiryaevskaya 2017).

Despite these mutual benefits, Russian-German interdependence can still be characterised as asymmetric given the former's ability to wield its influence in both German and EU politics. In Germany, the Nord Stream II project has exacerbated divisions within the coalition government over its foreign policy toward Russia. Merkel's stance on Russia has been criticised for being 'contradictory' (Hoffmann et al. 2016). On the one hand, she supports the creation of the pipeline and has publicly declared that Nord Stream II does not pose a direct threat to the diversification

of supplies in Europe. On the other hand, since the 2014 conflict in Ukraine, she has led the German, French, British and US efforts to impose heavy sanctions on Russia for its aggressive behaviour. Conservatives in Merkel's Christian Democratic Union (CDU), including Elmar Brok, share this view that sanctions 'send a strong message to Putin that the West is serious' and that 'now is not the time to discover one's affection for Russia' (Hoffmann et al. 2016).

Yet, members of the opposition fear that Merkel's tough approach is damaging the country's relationship with Russia with severe costs to the country's economic and security interests. The Social Democratic Party (SDP) has warned that sanctions will weaken Russia's incentives to act on Europe's behalf when dealing with the Assad regime. As the number of refugees fleeing the Syrian civil war grows, overburdened European host countries rely on Putin to use his influence in the country to end the fighting. Even members of the CDU's sister party in Bavaria, the Christian Social Union (CSU) oppose the sanctions on these grounds. In place of Merkel's approach, the SDP calls more conciliatory policy toward Russia based on open dialogue (Hoffmann et al. 2016; De Maio 2016: 12–13) Thus, Merkel finds herself in an extremely difficult position. 'She needs to signal flexibility towards Russia on Nord Stream 2' while also being mindful of the 'potential damage Nord Stream 2 could do to European energy independence and to the credibility of European foreign policy' (DeMaio 2016: 13).

German public opinion is divided as well (Hoffmann et al. 2016). The business community favours building the pipeline to bolster the existing trade relations. Merkel has catered to the economic motivations of the pipeline, calling it a commercial project among private investors (De Maio 2016: 12). However, members of the Green Party have publicly criticised Germany's incoherent foreign policy stance. In sum, asymmetric interdependence has led to competing interests and political divisions in Germany – evidenced in the SDP's opposition to sanctions and the business community's support of the pipeline project – in a way that caters to the economic and political interests of Russia. By utilising such political divisions, Russia has been able to penetrate the hardline, pro-West stance of the CDU and maintain Gazprom's indispensability in the region (Table 2).

Policy implications for Russia–Europe relations

The EU's stance toward Russia has hitherto viewed the latter's monopoly over gas as a threat to regional security. Despite scant evidence of Russia's willingness toward overt economic coercion, or the effectiveness of such strategies of economic disruption, 'a consensus has emerged among Western policy analysts and commentators that regards gas primarily as a mighty weapon of a Russian elite, which does not think in terms of a win-win but rather sticks to international zero sum type of games' (Goldthau 2008: 687). Accordingly, in recent years, the EU has dramatically revamped its energy strategy to decrease Russia's monopoly and steer market conditions in its favour. Major policy initiatives include liberalising the regional gas market, demanding unified pricing from Gazprom, investing in energy efficiency, and diversifying supply through new networks like the Southern gas corridor.

However, it should also be recognised that the EU and Russia have incentives to deepen their interdependence. More attention should be given to how globalisation has altered the nature of asymmetric trade by reducing the ability for exporting countries to initiate supply and influence effects without severe economic and political consequences. At the same time, the situation of asymmetric interdependence can lead to both short-term and long-term influence effects, whereby the domestic balance of power may be altered to empower specific interest groups or new political divisions are created. It can also lead to political economic fractures within the EU. The Nord Stream II pipeline project, for example, can threaten the geopolitical security of countries not included in the deal. Countries in Central and Eastern Europe have arguably the most to lose from the project as they rely on Russian gas for the majority of their energy supply and for revenue from transit fees. For Ukraine, Poland, Romania, Estonia, Hungary, Czech Republic, Lithuania, Latvia, Croatia, and the Slovak Republic, the pipeline could enable Russia to cut off gas supplies to them 'without affecting access to the main Western European market' (De Maio 2016: 4). Even Merkel has said that she would not support the pipeline if it meant Russia would completely shut out Ukraine (Reuters 2018).

Beyond the former Soviet Union and its satellite states, the pipeline also endangers the national interests of other European countries. Italy's experience with asymmetric interdependence as an EU member provides a useful illustration. If Germany becomes the new destination for Russian gas imports, this would seriously weaken Italy's attempts to expand its presence in the European gas market. Up to this point, Italy has been actively involved in the construction of the Southern Gas Corridor (SGC) which creates direct gas routes from the Middle East to Italy. Yet, as De Maio points out, 'transferring the fulcrum of EU energy supply north towards Germany would reduce the benefits of the SGC development, and undercut central Italy's role in redistributing Caspian gas to the rest of the EU market' (De Maio 2016: 9). Despite these concerns, Italy continues to see value in maintaining good relations with Russia. Like Germany, it has a long-standing trade partnership with Russia, importing gas, oil, and metals from the Federation and exporting a variety of finished products. It also relies on Libya for a significant portion of its oil demand, and thus sees Russia's influence in the country as key to maintaining a reliable flow of supply. As a result of this asymmetric dependence on Russia, Italian company, Saipem, signed a multi-million-dollar contract with Gazprom to join the construction team for the pipeline. In other words, Russian influence is strong enough for Italy to ultimately find it favourable to join the project rather than remain outside, even if this meant tipping the balance of power further in Germany's direction. Moreover, the competition between Germany and Italy to become Europe's new destination for gas gives Russia 'ample opportunity […] to gain leverage in EU foreign policy and ultimately discourage Europe from diversifying' (De Maio 2016: 13). Rather than unifying Europe in its battle to reduce the region's dependence on Gazprom, competing economic interests in each country may further undermine the EU's role and ability to implement its common energy policy.

Appendix

See Figs. 1 and 2 and Tables 1 and 2.

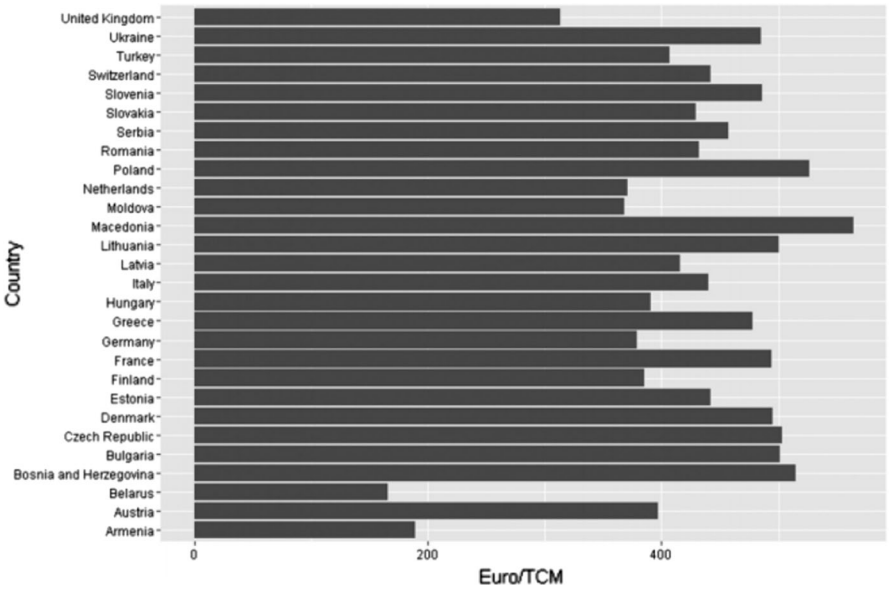

Figure 1 Prices for Gazprom gas by country, 2013 (Source: Hinchey 2018: 88)

Figure 2 Nord Stream I and II (Source: Umbach 2017)

Table 1 Russia-Europe gas trade in 2012 by export and import shares (Source: Orlov 2015: 494)

	Export shares[a] (percent)	Import shares[b] (percent)
OECD countries		
Austria	4.2	63.2
Czech Republic	35	99.96
Estonia	0.3	100.0
Finland	1.7	100.0
France	3.0	13.5
Germany	15.3	36.9
Greece	1.1	56.0
Hungary	1.7	43.8
Italy	8.5	26.7
Japan	5.5	9.6
Korea	1.3	5.8
Luxembourg	0.1	24.0
Netherlands	1.4	11.2
Poland	4.6	79.8
Slovakia	2.2	100.0
Slovenia	0.2	42.0
Turkey	12.4	57.7
Non-OECD countries		
Armenia	0.9	80.4
Belarus	9.5	100.0
Bosnia and Herzegovina	0.1	100.0
Bulgaria	1.2	100.0
Georgia	0.1	12.0
Kazakhstan	0.7	32.8
Latvia	0.8	100.0
Uthuania	1.6	100.0
Moldova	1.4	100.0
Romania	1.2	85.6
Serbia	0.5	54.5
Ukraine	15.1	99.8
Total	100.0	

[a]Export shares of gas from Russia to destination in Russian total export supply

[b]Import shares of Russian gas in total import demand for gas in destination country

Table 2 Summary: asymmetric interdependence and its effects (Source: BP 2016, EIA 2017, European Commission 2019, Nowak 2014, Shiryaevskaya and Parkin 2018, and Yardley and Becker 2014)

Ukraine						
Dependence on Russian gas	Primary energy consumption	Gas (as % primary energy consumption)	Alternative energy sources (as % primary energy consumption)			
			Coal	Nuclear	Petroleum and other liquid fuels	Renewables and hydroelectricity
60% (as of 2014)	85.1 mtoe	30% (25.9 mtoe)	34 % (29.2 mtoe)	23% (19.8 mtoe)	10 % (8.5 mtoe)	2% (0.3 mtoe; 1.4 mtoe)
Barriers to use of alternatives	Revenue from transit fees and price subsidies Profitability of rent-seeking measures by Ukrainian gas companies Influence of pro-Russian interest groups in energy policy					
History of gas trade with Russia	Loss of supply during 2006, 2009, and 2014 conflicts Reversed decision on the Odessa-Brody pipeline					

Bulgaria								
Dependence on Russian gas	Final energy consumption (2016 levels)	Gas (as % final energy consumption)	Alternative energy sources (as % final energy consumption)					
			Biomass and renewable waste	Derived heat	Electricity	Petroleum	Solid fuels	Less than 0.01 %:
90 % (as of December 2014)	9.66 mtoe	14 % (1.31 mtoe)	13 % (1.21 mtoe)	0.08% (0.78 mtoe)	25 % (2.49 mtoe)	35% (3.45 mtoe)	0.04 % (0.34 mtoe)	solar, geothermal, wastes/non-renewables
Barriers to use of alternatives	Strong pro-Russian, coalition in Bulgarian politics Strong anti-fracking movement Ban on extraction and exploration of shale gas							
History of gas trade with Russia	Loss of supply during 2006, 2009, and 2014 Ukraine-Russia conflicts Controversial stance on South Stream project							

Table 2 (continued)

Germany								
Dependence on Russian gas	Final energy consumption (2016 levels)	Gas (as % final energy consumption)	Alternative energy sources (as % final energy consumption)					
			Biomass and renewable waste	Derived heat	Electricity	Petroleum	Solid fuels	Less than 0.01 %:
60% (as of 2017)	216.45 mtoe	25% (54.39 mtoe)	0.06% (13.52 mtoe)	0.04% (1.13 mtoe)	21 % (44.49 mtoe)	38% (82.23 mtoe)	0.04 % (10.16 mtoe)	solar, geothermal, wastes/non-renewables
Barriers to use of alternatives	Geopolitical advantages of Nord Stream II Competing interests and divisions in German government over energy policy and relations with Russia Preference of gas over coal in short-term during transition to renewables							
History of gas trade with Russia	Longstanding history with mutual benefits No supply disruptions Diversity of German supply							

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