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# When Interdependence Produces Conflict: EU–Russia Energy Relations as a Security Dilemma

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*Abstract:* Contrary to the expectations of liberal theories, interdependence between Europe and Russia in the energy sphere has exacerbated security tensions between the two sides, leading to the competitive foreign policies that now see them at loggerheads in Ukraine. Interdependence has not worked because both sides have been worried that in the future interdependence will become asymmetrical (that is, that they will become more dependent than the other side and that the other side will take advantage of this weakness) and they have adopted policies to reduce their exposure, but they cannot reduce their own dependence without also threatening to increase the dependence of the other side. As a result, the relationship looks like a classic security dilemma – where neither side can improve its own security without threatening the security of the other side. These findings dispel commonly held notions about the pacific effects of interdependence and show that interdependence can exacerbate security tensions, particularly when it is focused on one area and falls short of complex interdependence.



The crisis in Ukraine challenges the conventional wisdom about the relationship between economic interdependence and conflict. Contrary to the expectations of liberal theories, economic interdependence between the European Union (EU) and Russia, which is especially pronounced in the energy sphere, has not lessened European and Russian security concerns about the other side, but has exacerbated them. Nor has it stopped them from adopting the adversarial policies that are at the root of the present crisis. Both sides' efforts to include Ukraine in their competing regional integration projects destabilized the political situation in that country, precipitating a civil war in which the EU and Russia support opposing parties.

Much of the literature on interdependence argues that increased economic interdependence reduces conflict between states.[1] Policy-makers often use these arguments to suggest that interdependence will lead to more cooperative and friendlier relations and alleviate the security concerns of potential adversaries. In measuring the pacific effects of trade, most studies focus on military conflict as the dependent variable and pay less attention to the effects that interdependence has on the overall relationship (that is, whether it makes it more or less cooperative or conflictual). Interdependence may make it less likely that states will allow disputes to escalate into direct military confrontation. However, in increasing both sides' vulnerability to actions taken by the other side, interdependence may also exacerbate states' security concerns, prompting them to adopt adversarial policies that increase tensions and promote security competition. The effect that interdependence has on

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the overall character of relations between states, rather than the relationship between interdependence and direct military conflict, may be the more interesting research question in the modern world, where interstate military conflict (especially among major powers) is increasingly rare and has been in most cases made almost unthinkable due to nuclear weapons. Moreover, the situation in Ukraine demonstrates that increased security competition between large states can have spillover effects that generate armed conflict and civil war in smaller or less stable states.

With this last point in mind, this article will look to examine the relationship between interdependence and conflict by looking at a critical case of contemporary economic interdependence: the Russia–EU energy relationship. A close examination of this case reveals that economic interdependence has led to increased political conflict and intensified economic and security competition between the two sides. Both sides have come to see their growing dependence on each other as a significant risk to their security and economic interests and have thus adopted policies to lessen this dependence and improve their position relative to the other side. These policies inevitably threaten the security and economic position of the other side. As a result the relationship begins to take the form of a classic security dilemma – where neither side can improve its security without threatening the security of the other. States can avoid this trap if their relationship is one of complex interdependence, where interdependence is more robust because it is dispersed along many different dimensions. However, this is not the case in the EU–Russia relationship because interdependence really only exists in one area – the energy relationship. These findings help dispel commonly held notions about the pacific effects of interdependence and show that in many circumstances interdependence can actually exacerbate tensions and promote conflict between states.



## Economic Interdependence and Conflict in International Relations Theory

The promotion of economic interdependence has been a favoured policy tool for improving political relations with erstwhile adversaries. Economic engagement played a critical role in Germany's policies of Ostpolitik towards the Soviet Union and Eastern Bloc during the Cold War. One of the arguments behind expanding western Europe's energy trade with the Eastern Bloc at the time centred on the effects that it could have in diffusing Cold War tensions.[2] One of the leading arguments for China's membership in the World Trade Organization (WTO) was that increased economic interdependence with WTO countries would lead China to adopt a more cooperative foreign policy. According to the logic behind these policies, mutual need in trade may motivate each state to strengthen bonds in other areas, thereby strengthening the web of interstate linkages that tie states together and decreasing conflict between them.

Scholars going back to Adam Smith and Immanuel Kant have theorized about the pacific effects of economic interdependence.[3] According to these theories, economic interdependence fundamentally affects states' calculus of utility. States are deterred from initiating conflict against their economic partners for fear of losing the commercial gains produced by their economic relationship.[4] Trade and commerce are also

posited to have a pacifying effect on leaders and citizens alike, making them more civilized and less belligerent. As economic interdependence expands, economic interests come to supersede security interests, and national interest comes to be defined more by the pursuit of wealth rather than state power.[5] Several prominent large-N quantitative studies that look at the relationship between state dyads seem to confirm these insights, supporting the general proposition that there is an inverse relationship between interdependence (often measured in terms of trade volumes) and conflict.[6]

However, not all studies agree that economic interdependence reduces conflict between states. Marxists and neo-Marxist theories see economic interdependence as a source of conflict between developing and developed states; creating economic relationships that are inherently exploitative, retarding the development of poorer states, and fostering their economic and political domination by those states that are more developed.[7] Scholars working in the realist tradition also see power disparities that are produced by interdependence as a potential source of conflict between interdependent states.[8] Most realists believe that economic interests are always subordinate to military and security concerns in states' utility calculus and they thus consider economic interdependence to have a negligible effect on conflict behaviour.[9] Some prominent realist studies argue that economic interdependence, like any other factor that increases contact and interaction between states, can actually stimulate conflict and belligerent behaviour.[10] In making their arguments, realists often point out that the high degree of economic interdependence between Europe's belligerents on the eve of the First World War did not stop them from going to war.[11] Several large-N studies conducted from the realist perspective find that interdependence actually promotes conflict.[12] To confuse matters further, many of these studies use data sets and methods that are similar to the quantitative studies cited earlier that support the opposite conclusion.

The inconsistencies and contradictions in the literature highlight the need for more complex theories about the relationship between economic interdependence and conflict.[13] In measuring the dependent variable, studies need to clearly distinguish between the effects that interdependence has on the probability that military conflict will break out between interdependent state dyads, and from the larger effect that it has on relations between these dyads. It is possible that interdependence can make the former less likely, while also increasing tensions and competition (short of the breakout of military hostilities).[14] The discussion of European Union (EU)–Russian relations in this article will focus on increased tensions and competition in the EU–Russia relationship, rather than the absence of military conflict between the two countries, and will treat it as the dependent variable to be explained.

In terms of the independent variable, studies must pay more attention to the nature of economic ties; particularly the degree to which dependency in the relationship is mutual (whether it is asymmetrical or symmetrical) and also on how complex the relationship of interdependence is, that is, whether interdependence exists in one particular area or whether it extends to different areas. The relationship that this study will focus on, Russia–EU relations, is one where the two sides are mutually dependent in one of the most important areas of their economic relationship, energy

relations, to the point where we can say their economic relationship is one of symmetry. However, interdependence is only really developed in this one area and does not extend to other areas, and thus the overall relationship between Russia and the EU is not one of complex interdependence.

Keohane and Nye's seminal study of power and interdependence distinguishes between s*ymmetrical interdependence*, where two parties are equally dependent on each other and therefore will be equally hurt by a break in the relationship, from *asymmetrical interdependence,* where one state is substantially more dependent on the other, and can be hurt more by such a break.[15] Asymmetrical interdependence gives the less dependent partner in the relationship political leverage over the more dependent partner. It can therefore become a cause for concern that intensifies conflict between states.[16] According to Albert Hirschman, Nazi Germany set out to make the smaller countries of Eastern and Southern Europe dependent on trade with Germany (even accepting unfavourable balances of trade with these countries) in order to gain political leverage over them that it could later use to advance its imperialist foreign policy goals.[17]

In theory symmetrical interdependence eliminates the danger that one side will use the threat of breaking the relationship to manipulate the other because both sides would be equally hurt by any cut in the economic relationship. Under symmetrical interdependence states have the opportunity to reap the benefits from economic interdependence without the fear of being subject to the political manipulation found in asymmetrical relationships.

Does this mean that symmetric interdependence fosters more pacific relations between states? The empirical evidence does not seem to support such a relationship. In her study of 70,000 state dyads over a period of 115 years, Katherine Barbieri finds that symmetrical dependence diminishes conflict only in dyads where dependence is limited, that is, where trade between the countries has a limited significance for the country's overall trade or GDP. Where interdependence between country dyads is extensive, that is, where trade between the two countries represents a large proportion of their overall external trade or GDP, dyads with symmetrical ties are actually more prone to conflict.[18] The Russia–EU energy relationship seems to fall in line with these findings. Neither of the two sides' fears of dependence has been mollified by the fact that dependence is mutual and both have looked for ways to limit their dependence on the other side.

Why has interdependence not played the pacifying role ascribed to it by liberal theory, even when it is symmetrical? In trying to explain these findings, Barbieri notes that interdependence limits states' freedom to pursue their national objectives. This can give rise to frustrations that spill over into more intense forms of conflict.[19] While this kind of explanation is persuasive, it does not directly challenge the logic behind most causal arguments for why asymmetrical relationships should be more peaceful. This article argues that the causal argument put forward by liberal theories for why symmetrical independence fails to reduce conflict is flawed in that it operates from a static assumption of how states calculate their utility. It assumes that in any dyad a state will make its utility calculations about what policies to adopt vis-à-vis the other state in the relationship based on the existing level of interdependence between these states.

But in choosing their policies states not only focus on present conditions but also take into account how conditions may change in the future. Dale Copeland adopts a more dynamic approach that takes states' expectations of the future into account in explaining why interdependence leads to peace in some situations and conflict in others.[20] According to Copeland whether or not interdependence produces peace or war depends on a state's calculations about the likelihood that trade will continue in the future. In situations where states are highly dependent on a particular trade relationship but are pessimistic this relationship will continue in the future, interdependence will exacerbate conflict. States that are threatened with the end of trading relationships that they depend on for the provisions of key strategic goods and resources may chose to go to war to acquire these goods and resources.

Copeland's insight about the critical importance of expectations of future trade has important implications for the study of symmetrical interdependence. Over time, the balance in any interdependent relationship may become altered, disrupting symmetry and making one state more dependent on the relationship than the other (a situation of asymmetry). States must worry that the relationship will change to one of asymmetrical dependence, where they find themselves susceptible to political pressure by the other state.

Under these circumstances states may try to pursue policies that lessen their dependence on the other state. But they cannot reduce their dependence without also increasing the dependence of the other state – which by extension threatens that other state's security and independence. They thus find themselves facing a situation that very much looks like a classical security dilemma, where no state can increase its security without threatening the security of other states.[21] This has been the case in the Russia–EU energy relationship, where the steps that each side has taken to decrease their dependence also threaten to tip the balance in the relationship so as to make the other side more dependent on it.

States can escape this trap when interdependence between them is *both* symmetrical and complex, that is, when states are mutually dependent across a range of economic, political, and security issues.[22] In situations of *complex interdependence*, it is difficult to measure just who is more dependent on whom because dependence is dispersed along many different dimensions.[23] This situation minimizes the risk that one state will use the other's dependence as a tool of political leverage because it itself may be dependent on that other state in a different relationship. The American–EU relationship is characterized by complex interdependence. The two sides are mutually dependent on a broad range of issues, including trade (the USA is the EU's largest trade partner and the EU is America's fourth largest), finance (the USA and Europe are each other's primary source and destination for foreign direct investment (FDI)), and security (the USA and European states are tied together through NATO, one of the most successful defensive alliances in history). When interdependence between two sides is complex, concerns about asymmetry developing are less pronounced. Moreover, even if asymmetry develops in one issue area, the overall relationship maintains its symmetry because mutual dependence extends to other important economic and political issues.

Unfortunately the Russia–EU relationship is not one of complex interdependence. Even though economic cooperation between the two has grown substantially since the end of the Cold War, it is very lopsided in the favour of the EU. Over 50 per cent of Russian foreign trade (exports and imports) is with the EU, and Russia is the EU's third largest trading partner (though only accounting for 9 per cent of EU trade). The EU is Russia's primary source of FDI, with nearly 75 per cent of Russian FDI coming from EU member states.[24] FDI has also been largely a one-way streak as Russian FDI in Europe is negligible. Resistance by the EU and individual European governments has largely deterred Russian companies from investing in energy and other key strategic sectors.[25] The trade relationship is largely defined by energy trade and much of EU investment in Russia is actually money invested back into Russia by Russian firms that keep their assets outside of Russia in offshore accounts in EU member countries such as Cyprus.

Symmetrical interdependence is thus confined to one area: the energy relationship. The other aspects of the EU–Russian economic relationship are underdeveloped (or lopsided in that Russia is the dependent party). They cannot offset concerns about the energy relationship developing into one of asymmetry, where one side can use the other's dependence against it.

Germany may be the only EU member where interdependence has developed furthest beyond the energy sector. Russia is a major market for German exports and also for German FDI. Russia's domestic industry is heavily dependent on imports for German machinery. It should thus be no surprise that of all the EU countries, Russian–German energy relations have been the most cooperative and largely free of the elements of securitization found at the EU level. Germany has shown relatively little interest in diversifying away from Russian supplies and has thrown support behind energy projects that increase European dependence on Russian gas such as North and South Stream pipelines. However, these moves have drawn the ire of many eastern European countries that are fearful about growing Russian power and European dependence on Russian energy. Polish Defence Minister Radek Sikorsky called North Stream the 'new Stalin-Ribbentrop Pact', accusing Germany and Russia of again looking to 'carve up' Poland and the rest of central Europe between them.[26]

## From Interdependence to Conflict in EU–Russia Energy Relations

Most studies that examine the relationship between economic interdependence and war adopt a quantitative approach that examines a large number of cases. These kinds of studies are static as they focus on the level of interdependence at a particular point in time. A more detailed case study allows us to capture the ways in which actors' expectations and concerns about the future influence their behaviour. From this perspective, the Russia–European Union (EU) energy relationship is a particularly revealing case and helps us develop an understanding of how expectations about the future were able to undermine the pacific potential of a growing and mutually beneficial economic relationship. Moreover, as has been clearly demonstrated by the ongoing crisis in Ukraine, the case is of great significance to both

European and international security. It would warrant a detailed examination even if it did not have the same significance for our overall understanding of interdependence and the effects it has on security.

The Russia–EU energy relationship meets the definition of symmetrical interdependence set out in the previous section. The EU is heavily dependent on Russia for its energy needs. Russia provides the EU with over 35 per cent of its crude oil imports and 30 per cent its natural gas imports (EU Energy in Figures 2013).[27] Interdependence is symmetrical, as both sides would face daunting costs if the energy relationship is severed or disrupted. Russia's energy trade with the EU is its most important foreign economic relationship. In all, 78 per cent of Russian crude oil exports and over 70 per cent of Russian natural gas exports go to the EU.[28] Oil and gas exports constitute nearly 25 per cent of Russian GDP and almost half of the revenues that fund the Russian government budget.[29]

Yet contrary to the expectations of many proponents of the benefits of interdependence, interdependence in the energy field has not reduced mistrust and conflict between the two sides. In fact the opposite has been true. Europe is increasingly worried about its dependence on Russian hydrocarbon exports and fears that Russia will try to use Europe's energy dependence to blackmail Europe.[30] European governments and private companies have blocked Russian efforts to buy into European companies, especially in the downstream energy sector. The EU has looked to diversify its supply routes by building pipelines that bypass Russian control and bring energy directly from the former Soviet states of Central Asia and the Caucasus to European markets. The EU has also passed measures to liberalize the European energy market which adversely affects Russia's state-owned energy companies.

This has prompted Russian leaders to complain of double standards and discrimination. It has also awoken suspicions about Europe's true intentions. According to Sergei Kortunov, 'All these efforts at so-called "market liberalization" and the building of new pipelines are only designed to weaken the Russian state and place our natural resources under Western control.'[31] In response to the EU's measures, Russia has fought tooth and nail against European gas market liberalization and has worked to secure its control over pipeline routes and energy supplies in the post-Soviet space. It has also looked to lessen its dependence on European markets by diversifying to Asian markets. Russia's moves, in turn, increase European anxieties about dependence on Russian gas and raise further doubts about Moscow's true intentions.

If Europeans are so fearful now that Russia will use its energy dependency against them, this seems to beg the question: Why were western European leaders willing to establish relationships of energy dependence with the Soviet Union in the late Cold War period in the first place – especially at a time of such intense geopolitical competition between East and West? Firstly, western Europe was much less dependent on Soviet gas – both as an overall percentage of its gas imports and also as a percentage of its overall energy profile – than it is on Russian gas today. In 1983, western Europe received 23 per cent of its gas from the Soviet Union, but this represented less than 2 per cent of its primary energy consumption as compared to 7 per cent in 2013.[32] Moreover, western Europe's energy dependency on Russia developed slowly and

western European governments were careful to hedge against their dependence by developing alternative sources of supply that could be mobilized if Soviet supplies were cut. Plentiful alternative sources inside Europe were available at the time (from Holland and Norway) that could make up for Soviet supply disruptions and this lessened western Europe's fear of growing too dependent on the Soviet Union.[33] These sources have now become depleted as European production is set to steeply decline in the coming years.

Moreover, in expanding the EU to membership to the states of the former Soviet Bloc and the Baltic States of the Former Soviet Union, Europe has taken on a host of states that are almost entirely dependent on Russia for its gas supplies, and thus increased Europe's overall dependence. In 2007, Russian gas accounted for 100 per cent of gas used by the Baltic States, 98 per cent in Slovakia, 78 per cent in the Czech Republic, and 60 per cent in Hungary.[34] For historical reasons, these states are particularly sensitive to the possibility that Russia may use its 'energy weapon' to threaten them and they have been the most vocal in calling attention to the need for Europe to lessen its dependence on Russian gas. Moreover, these same concerns have subsequently been voiced by leaders from western European states who are also wary of Russia's growing power and assertiveness in its former imperial domain and the implications this has for European security as a whole.

During the Cold War the Soviet Union never disrupted gas supplies for political reasons (though it often was not able to deliver on promised gas volumes in a timely manner because of technical difficulties). In fact, the Soviet Union became a much more reliable partner than many other European suppliers, even Norway, whose gas deliveries during this period were interrupted several times by labour disagreements. 'This track record contributed decisively to the perception of red gas as secure and to the willingness of Western importers to scale up their imports from the East.'[35] This situation has dramatically changed during the post-Soviet period, as disputes over non-payment with transit countries such as Ukraine have on several occasions left European consumers in the cold. These crises have often had a political background that has made it easy to accuse Russia of using Energy as a political weapon. As a result, they alerted European leaders and publics to the potential vulnerabilities that have been engendered by their growing energy dependence on Russia.

Most observers place the blame for growing conflict in the energy sphere squarely on Russia. They argue that Russia's authoritarian government is using energy as a tool to expand its influence and pursue a geopolitical agenda designed to return Russia to superpower status.[36] They find evidence to support these arguments in Russia's decision to cut off gas supplies to Europe passing through Ukraine in 2006 and 2009 as well as in what they see to be Russia's increasingly aggressive moves to control pipeline routes and dictate preferential economic and political terms in return for supplying gas to former Warsaw Pact and Soviet states. These studies capture the ways in which growing dependency on Russia has increased Europe's overall security concerns. But they fail to appreciate just how dependent Russia has also become on European energy markets for its export and budget revenues. Nor do they appreciate just how threatening Europe's moves to bring down energy prices and diversify away from Russian supplies are from Russia's perspective.

Others see the conflict as stemming from the two parties' different world views. A post-modern Europe which has largely given up on the pursuit of hard power in favour of cooperation and interdependence is butting up against a realist and state-centric Russia, which still tends to see interstate relations in zero-sum terms.[37] From the European side the relationship has become unnecessarily 'securitized' in order to serve the interest of EU officials who are trying to find a way to expand their bureaucratic power.[38] These studies assume that all would be well in the relationship if both sides simply let the market guide the energy relations.

Studies such as these, which focus on perspectives and world views, fail to fully appreciate just how much the tangible economic and security interests of the two sides diverge when it comes to energy. As an energy buyer Europe has an interest in diversifying its suppliers and increasing competition on energy markets in order to drive energy prices down. As a producer Russia has an interest in establishing a monopoly over the market and driving up prices to their highest point possible. More than just the price of oil and gas is at stake. The price of hydrocarbons is a vital economic issue for both sides and has significant implications for domestic political stability and external security. Maintaining low energy prices is critical to Europe's economic health and continued global competitiveness. This issue is of growing importance. European manufacturers were already feeling the squeeze from Asian competitors who have an advantage because of cheaper labour costs. Now they also face stiffer competition from American producers who benefit from cheap shale energy.

The Russian economy's dependence on hydrocarbon exports magnifies the impact of even the smallest downturn in energy prices. The exploitation of hydrocarbons also plays a critical role in the Russian leadership's plans for modernization and economic development. Russia cannot live off of hydrocarbon exports indefinitely. Profits from oil and gas must be used for Russia's long-term economic development away from hydrocarbon dependency.

> [Russia's] strategic vision is currently dominated by the idea of profit-maximization from the sale of Russian oil and gas … these revenues are meant to reform the rest of the economy and to guarantee its drastic modernization and adaptation to the needs of the post-industrial society.[39]

For both sides the energy relationship is more than just a question of economic expediency. It is vital to their continued economic wellbeing and to their national values and objectives and thus represents a fundamental security question.[40]

## The EU's Energy Strategies for Securing Supplies and Keeping Prices Low

The European Union (EU) employs several strategies in order to improve its energy security and lessen its dependence on Russian gas. The first strategy is the liberalization of energy markets inside and outside the EU. The liberalization of EU gas markets is driven by the gas directives of 1998 and 2003, and by the Third Energy Package – a set of laws to regulate EU gas and electricity markets which was adopted into law in July 2009. Inside the EU, these laws legislate the break-up of

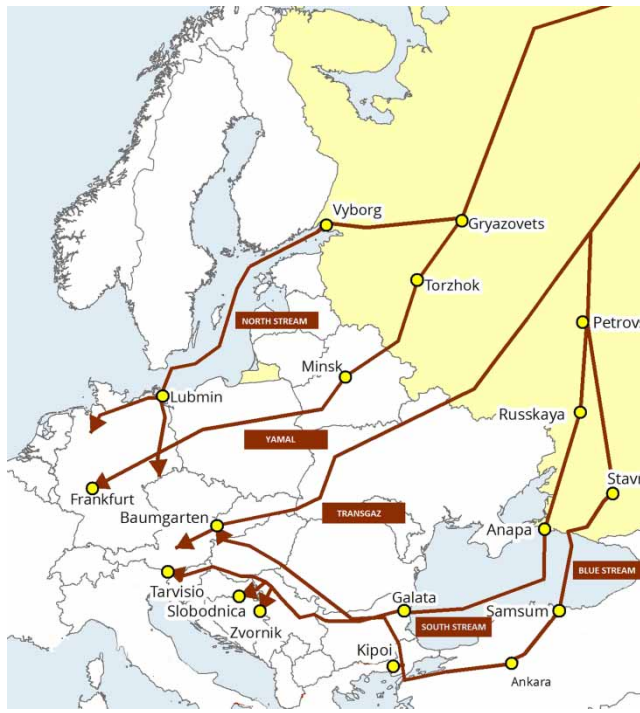
vertically integrated national energy companies and the 'unbundling' of their downstream assets. With unbundling, firms are barred from vertically integrating the various segments of the energy supply chain (such as production, refining and processing, transportation, and distribution) under their sole ownership. According to this logic, vertical integration harms consumers because it puts up barriers to the entry of new producers and firms and thus limits competition. Unbundling both affects European gas operators that are vertically integrated from production to distribution and restricts companies in producer countries (such as Gazprom) from entering downstream sectors in Europe. The Third Energy Package forbids gas producers to also operate gas transit systems (that is, pipelines). It gives EU member states three options on how to deal with companies that both export gas to the EU and hold ownership of pipelines. The first option forces these gas producers to transfer the management of their pipelines to an independent entity, but allows them to retain ownership. Under the second option, gas producer can retain ownership but must allow other companies to use its pipelines. The third, and most drastic, option forces gas producers to sell all of their pipeline stakes.

Some EU countries immediately tried to implement this last option. The Lithuanian government ordered the break-up of the national gas utility company Lietuvos Dujos (in which Gazprom owned a 37 per cent stake), separating its gas sales and gas transmission operations.[41] Putin publicly condemned the move as blatant 'robbery' at a meeting with EU business leaders in 2010.[42] In what appears to be a retaliatory move, Gazprom has increased prices to Lithuania so that they are now substantially higher than those to other Baltic States. The Lithuanian government, in turn, has filed an antitrust complaint against Gazprom with the European Commission, the result of which is still pending.[43]

The EU has also put pressure on Russia and other producer countries to accept the European Energy Charter. Countries that sign the charter agree to open up their energy markets to competition from foreign (that is, EU) companies and to remove restrictions on foreign ownership in their energy sectors. The charter also establishes the principle of 'freedom of transit', thereby guaranteeing access to pipeline networks to all producers. This last principle would force Russia's energy transit monopoly Transneft to open access to its pipeline system to European companies. In this way, the EU hopes to diversity supply by gaining direct access for its energy companies to the hydrocarbon resources of post-Soviet energy producers, such as Turkmenistan and Kazakhstan, which must use the Russian pipeline system to get to European markets. Despite European pressure, Russia refuses to ratify the charter, as it is unwilling to give up control over its pipeline infrastructure to foreign companies.[44]

For Europe, liberalization of energy markets and energy transit helps to break Russian state-controlled companies' grip over its energy supplies, alleviating Europe's fears that the Russian state will use Europe's energy dependence against it. Russia's leadership, however, is generally apprehensive of Europe's push for energy market liberalization and sees it as largely serving Europe's interest and ignoring Russia's need for stable prices and markets. Russian observers are also suspicious that Europe is using liberalization to gain control of Russia's energy assets for European companies.[45]

FIGURE 1
RUSSIAN GAS PIPELINES TO EUROPE (EXISTING AND PLANNED)




*Source*: Learn Europe.

The second strategy the EU allows is to diversify its sources of energy supply in order to develop alternatives to Russian gas and oil. As a part of this strategy, the EU has tried to promote the development of a 'southern energy corridor' that would bypass the existing Russian-controlled pipeline systems and bring Caucasian and central Asia's oil and gas directly to Europe. The most successful of these energy transit projects is the Baku–Tblisi–Ceyhan (BTC) pipeline, which brings oil from Azerbaijan, Kazakhstan, and Turkmenistan to European markets without passing through the Russian territory. BTC has a capacity of 1.2 million bpd and 249.62 million barrels of oil were exported through the pipeline in 2013.[46] Throughout the latter half of the 2000s the EU also pushed for the development of a major natural gas pipeline project, Nabucco, which would diversify European gas supply by connecting European markets to natural gas sources in the Caucasus, central Asia, and Middle East. However, the project has never been able to find adequate sources of supply to fill the pipeline. As a result Nabucco has had trouble moving past the initial planning stages, and most experts now consider Nabucco to be all but dead.[47]

As an alternative to Nabucco, the EU has thrown its support behind a much less ambitious project to open up the southern gas corridor, the Trans Adriatic Pipeline (TAP) project (Figure 1). A major driving force behind this project has been State

Oil Company of Azerbaijan Republic (SOCAR), Azerbaijan's state petroleum company, which made the ultimate decision to give access to its Shah Deniz gas field to the TAP project over Nabucco. TAP will link up with the Trans Anatolia Pipeline (TANAP), which brings gas from Shah Deniz through Turkey at the Turkish–Greek border. From there it will transport the gas through Greece and Albania and under the Adriatic Sea to Italy (from where it can be transported on to the rest of Europe). Along the way TAP will supply gas to the Balkan states of Greece, Bulgaria, Albania, Croatia, Macedonia, and Montenegro. Because of the shorter distances involved and the ready supply of gas, TAP is a much more economically feasible project than Nabucco. However, it is also much less significant strategically and will have a much smaller impact on Europe's dependence on Russian gas. Both pipeline projects envision similar gas volumes; 10–20 billion cubic metres (BCM) for TAP and 10–25 BCM for Nabucco. But TAP will bring gas to Italy, which has very good diversified sources of gas supply, and to Balkan countries that have small or undeveloped gas markets. Nabucco would have transported gas directly to larger central European markets that are much more dependent on Russian gas.[48]

The EU is also investing in the development of alternative energy technologies that would make it less dependent on Russian gas, such as liquid natural gas (LNG) and shale gas. Advances in the extraction of shale gas, which is extracted from solid rock through horizontal drilling and high-pressure fluid injection known as 'fracking', are radically transforming global natural gas markets. The growth of shale has allowed the USA to overtake Russia as the world's leader in gas production (US Energy Information Agency 2014). Several European countries boast large reserves of shale gas, which, according to some studies, could allow Europe to reduce exports from Russia by half in the next 30 years.[49]

Thus far, however, fracking in Europe has run into considerable obstacles. European shale deposits are much farther underground and thus much more expensive to exploit than those in the USA. They are also located in areas that are much more heavily populated, giving rise to environmental concerns and strong political opposition to the development of shale. Several European countries, including France, Holland, and Bulgaria, have either banned or placed a moratorium on fracking. It is also unlikely that the USA will export significant volumes of shale gas to Europe in the near future. The USA may refrain from exporting shale gas in larger quantities in order to exploit the advantages that cheap energy gives the American manufacturing sector. Even if North American natural gas is exported, it is more likely that it will go to Asian markets where LNG prices are much higher.[50]

Nevertheless, the shale revolution is already having a significant impact on European energy markets – even if it does not come to Europe in the form of shale gas production or shale gas imports from the USA. In the American market, cheap domestic gas has displaced coal and LNG imports from countries such as Qatar. These supplies of coal and LNG have made their way to Europe, depressing demand for Russian gas and outing tremendous pressure on Gazprom to renegotiate its existing gas contracts with European consumers. In 2012, Gazprom reduced the price of gas in its long-term contracts with European customers by 10 per cent and paid out USD 3.2 billion in rebates to energy companies.[51]

### Russia's Strategies for Securing Markets and Maximizing Profits

Europe's energy strategies are at odds with the strategies Russia has adopted to defend its interests as an energy supplier. The two sides have developed very different positions about the role that markets and the state should play in the energy sector. While Europe pushes for liberalization and for decreasing the state's role, Russia's leaders believe the state must play a guiding role, especially in the natural resource sector, to insure that the country's natural wealth is used to further national economic development.[52] The Russian government works to guarantee that the largest and most lucrative deposits in Russia are developed by Russian companies, most of whom have close ties to the Russian state. In this way, profits from hydrocarbon exports will stay in Russia, where they can be reinvested in the overall modernization of the economy. In 2008, the Russian government adopted a law on investment in the strategic sectors of the economy that restricts foreign investment in 42 different sectors, including large oil and natural gas deposits. The Russian government also uses less formal methods to ensure that energy profits stay in Russia and under government control. Environmental violations have been used to pressure Western companies such as BP and Shell into selling stakes in major natural gas projects to Gazprom.[53] Russian businessmen who defy the Kremlin's wishes can face prosecution for tax invasion, embezzlement, and other crimes.[54] Russia's resistance to market liberalization and growing dirigisme in the energy sector give rise to suspicions in Europe that the Kremlin's true purpose is to build up Europe's dependency on Russia so that it can be called upon in the future to place leverage over Europe and to achieve Russia's less savoury foreign policy goals.[55]

The two sides also have a fundamental disagreement over how natural gas should be priced. Gazprom have fought tooth and nail to retain the current system of long-term contracts indexed to the price of oil. Gazprom prefers long-term contracts because they provide certainty over prices and guarantee that funds will be available for investment in production and transit infrastructure. This is especially important as most Russian gas fields date back to the Soviet period and Russian companies will have to make major investments in developing new gas deposits in order to maintain the current level of production.[56] They thus eliminate some of Russia's uncertainties about having to depend so heavily on the European gas market.

From the perspective of the European Union (EU), however, long-term contracts decrease Europe's energy security because they strengthen Europe's dependency on Russian gas.[57] EU authorities are calling for a turn towards spot pricing, arguing that long-term contracts are a barrier for entry into the market and thus contradict the EU's policy of promoting competition in energy markets.[58] In September 2012, the European Commission launched an antitrust investigation against Gazprom which focuses on the company's policy of linking contract gas prices to oil prices. Proponents of the probe argue that through this policy Gazprom has illegally hindered the free flow of gas through Europe and prevented supply diversification. If found guilty, Gazprom could face stiff fines and penalties of up 10 per cent of its gas export revenues (which exceeded USD 57 billion in 2011).[59] The Kremlin responded by passing a presidential decree which requires companies operating in strategic industries (such as

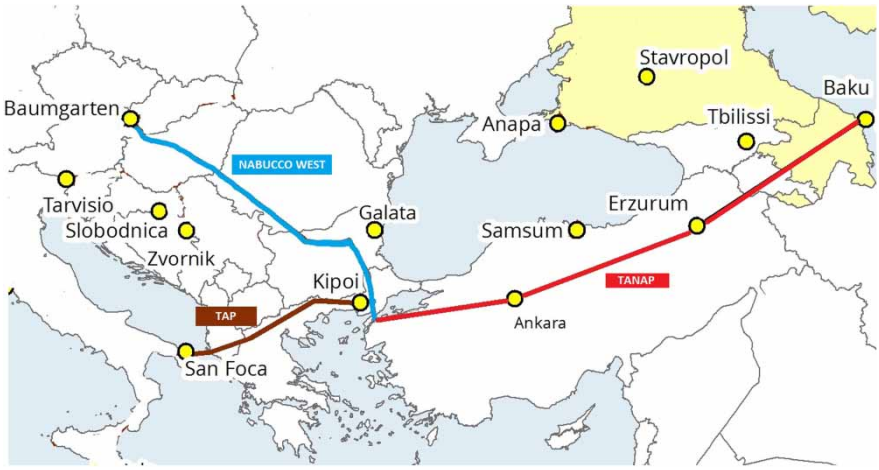
Gazprom) to coordinate their major actions with Russian authorities when they receive demands from foreign states or international organizations. Under this decree, Gazprom will have to seek government approval for any future price reductions to foreign customers.[60]

In the end, the fate of long-term contracts may be determined by the laws of supply and demand, rather than by the tug of war between Moscow and Brussels. Continued economic stagnation is depressing European demand for natural gas. At the same time, breakthroughs in liquid natural gas and shale have created a supply glut on the international gas market. Gazprom's competitors, such as Norwegian Statoil, already offer spot pricing. Under these circumstances, it will be difficult for Russia to defend long-term contracts and it may be forced to accept spot pricing as the new norm.

While Europe looks to diversify its supply sources and build new energy transit routes, Russia works to maintain control over energy supplies in other post-Soviet states and to make sure that these energy supplies are transported to Europe via Russian-controlled pipelines. Russia can take advantage of Soviet legacies to accomplish these goals. Most of the existing oil and gas infrastructure, including pipelines and refineries, was built in Soviet times and thus ignores present-day inter-republican borders. In most cases, existing pipeline systems must cross through Russia on their way to world markets. Existing pipeline and refining networks also make many former Soviet states dependent on Russia for their energy needs. For example, much of Kazakh gas must first follow Soviet pipeline system back to Russia before being sent back to Kazakhstan for consumption. Similarly, much of Kazakhstan's own oil must first be sent to Russia for refining before being sent back to Kazakhstan for domestic consumption. Thus despite the fact that Kazakhstan is a major oil and gas producer, the country is still dependent on Russia for much of its energy supplies. This provides Moscow with tremendous leverage over Astana. Russia has used this leverage to secure Russian participation in Kazakh energy projects and to discourage Kazakhstan from participating in pipeline projects sponsored by the West. Russia has also used its dominance over European markets to discourage Turkmenistan and Uzbekistan from selling their natural gas directly to Europe. Both countries have signed long-term gas supply agreements at reduced prices with Russia.[61] In previous years, Russia established a monopoly over central Asian gas volumes to Europe, which frees up gas volumes that would normally go towards domestic consumption to be exported to Europe and also helps Gazprom cover for temporary shortfalls in its supplies to Europe.[62] In this respect, Russia has successfully stayed one step ahead of the Europeans, locking down control over gas supplies throughout the former Soviet states, and thus denying gas to EU pipeline projects such as Nabucco.

In order to maintain its grip over energy transit and avoid conflicts with transit countries such as Ukraine and Belarus (which have threatened to disrupt flows to Europe), Russia is building new pipeline systems that bypass these countries all together. Russia is developing two new pipeline projects to bring natural gas directly to western European customers, bypassing central European and former Soviet states (Figure 2). The Nord Stream pipeline brings Russian gas directly to northern Europe via a pipeline under the North Sea from Vyborg in Russia to Greifswald in Germany.

FIGURE 2
TAP/TANAP VS. NABUCCO




*Source*: www.learneurope.eu. Reused with permission from Professor Jordi Marti-Henneberg under a CC-BY license.

The project has strong support from the German government and the German energy industry. There are plans to build a second pipeline that will double Nord Stream's current capacity to 56 billion cubic metres (BCM) of gas per year by 2016.[63] Russia was also developing a second pipeline project, South Stream, which would bring Russian gas to the southern European market via a pipeline under the Black Sea, thereby bypassing overland routes that currently pass through Ukraine. South Stream's planned capacity is 63 BCM and together South and North Stream would have been able to handle about two-thirds of the gas capacity that currently has to pass through Ukraine and Belarus on its way to Europe.[64] However, the South Stream project has faced a very tough European Commission antitrust investigation to make sure it conforms to EU energy legislation, which only promised to get tougher in the wake of the Ukraine crisis. Behind the scenes, leaders in Brussels have also put pressure on Bulgaria, Hungary, and Serbia to end their involvement in the project.[65] Putin finally announced that Russia had decided to scrap the project on 1 December 2014 citing the bureaucratic and political opposition from Brussels as the main cause behind this decision.[66]

Russia has taken steps to secure dominance over pipeline infrastructure in the Black Sea and Caspian regions in order to prevent these regions from becoming geographic corridors for bringing hydrocarbons from central Asia and the Caucasus directly to Europe. Russia completed construction of the Blue Stream pipeline, which brings gas directly from Russia to Turkey via pipelines under the Black Sea, in 2005. Observers believe that the project is intended to forestall EU efforts to establish a Trans-Caspian Pipeline (TCP) that would send gas from Turkmenistan and Azerbaijan directly to Turkey and on to European markets. The TCP would run under the Caspian Sea where it would connect with an existing pipeline in Turkey,

which in turn would be connected to the Nabucco pipeline. As much of the gas intended for the TCP now moves through the Blue Stream pipeline, the TCP project has been shelved for the foreseeable future.[67]

In securing its dominance over Eurasian energy supplies and building new pipelines, Russia looks to improve its economic security by protecting its market share on European energy markets – which is seen as essential to Russia's continued economic prosperity and future economic development. But they adversely affect European energy security in that they scuttle European efforts to diversify its energy supplies and deepen Europe's dependency on Russian energy.[68] They also give rise to fears that Russia is using energy as a 'weapon' to re-establish its influence in the post-Soviet space and eastern Europe.[69]

In order to decrease its dependence on European energy markets, Russia has tried to diversify its consumer base to include non-European and Asian markets. As a replacement to South Stream, Russia's Gazprom and Turkey's Botas have agreed to build an undersea pipeline directly to Turkey. The pipeline has a planned annual capacity of 63 BCM – roughly the same capacity as South Stream and nearly four times the amount of gas that Turkey already purchases from Russia. To sweeten the deal, Russia has offered a 6 per cent across the board price cut for gas sold to Turkey.[70] According to Timofei Bordachev, a prominent Russian expert on EU–Russia relations, 'In scrapping South-Stream in favor of an energy deal with Turkey Russia is showing the Europeans that it has alternatives to selling them gas.'[71]

The biggest potential alternative market, of course, is in China. China's development bank agreed to lend USD 25 billion to Russia's oil giant Rosneft and pipeline monopoly Transneft. In exchange both companies will send China 15 million tons of oil a year for the next 20 years.[72] China and Russia completed construction of the 3018 mile East Siberia Pacific Ocean (ESPO) pipeline, which will bring Russian oil directly to Chinese and Asian markets. Russia now sells 750,000 b/d to Asia as a whole, a fifth of its oil exports.[73] But perhaps most significantly, China and Russia have finalized a 10-year, 400 billion natural gas deal. The deal foresees Russia initially exporting up to 38 BCM of gas per year to China and negotiations are under way to expand volumes up to 61 BCM. Moscow and Beijing will share the costs of building the new USD 77 billion 'Power of Siberia' gas pipeline, which will bring gas from eastern Siberia to China. In the short term, the export volumes involved still pale in comparison to Russia's exports to Europe (Russia exported over 160 BCM to Europe in 2012).[74] However, the project opens up booming Asian energy markets, with Chinese natural gas demand alone projected to triple by 2020 to 130 BCM.[75] In the long term, Russia's expansion to Asia has the potential to break Russia's dependency on European energy markets, and shift the symmetry of interdependence decisively in Russia's favour if Europe continues to be dependent on Russian gas.

## Conclusion

Table 1 summarizes the different strategies Russia and the European Union (EU) use in order to achieve their energy goals. Both sides have adopted a range of policies

TABLE 1
EU STRATEGIES VS. RUSSIAN STRATEGIES FOR IMPROVING ENERGY SECURITY

| EU strategies | Russian strategies |
|---|---|
| *Liberalization of energy markets*<br>• Legislation to 'unbundle' vertically integrated energy companies<br>• Legislation guaranteeing equal access to pipelines and energy infrastructure<br>*Energy pricing that benefits consumers*<br>• Advocating short-term contracts and spot pricing for the natural gas market<br>*Diversifying energy supply*<br>• Establishing pipelines that bypass Russia (e.g. BTC, Nabucco, TAP, and TCP)<br>• Developing LNG and shale gas technologies | *Maintaining Russian state control of energy sector*<br>• Legislation to limit foreign ownership in 'strategic sector'<br>• Informal procedures to keep foreign companies out and discipline Russian business<br>*Energy pricing that benefits producers*<br>• Insisting on long-term contracts rather than spot pricing for the natural gas market<br>*Maintain control over Eurasian energy supplies and transit routes to Europe*<br>• Buying up energy transit infrastructure in the Commonwealth of Independent States<br>• Pressuring central Asian energy producers to use Russian pipeline infrastructure<br>• Building pipelines that bypass transit countries, (e.g. North Stream, South Stream, and Blue Stream pipelines)<br>*Diversification of markets*<br>• Negotiating long-term gas and oil contracts with China and other Asian countries<br>• Power of Siberia natural gas pipeline to China |



designed to improve their energy security and their position on energy markets. But any gains that either side makes invariably come at the expense of the other side. Liberalization of energy markets alleviates Europe's concern about the Russian state's ability to use energy blackmail against it. But it also gives rise to Russian concerns about losing control of its natural resource wealth to outsiders. The EU builds pipelines and seeks alternative sources (such as shale and liquid natural gas) in order to lessen its dependence on Russian hydrocarbons. But Russia fears that these strategies will drive down energy prices and hinder its plans to use energy revenue to modernize its economy. Russia builds pipelines to keep disputes with transit states from spilling over into larger supply disruptions. But Europeans fear that new pipelines will make it easier for Russia to use energy blackmail against transit states. What once promised to be an area where both sides could benefit from cooperation increasingly takes on the characteristics of a classic security dilemma, where neither side can improve its security without threatening the security of the other.

On the surface, the Russia–EU energy relationship seems to be a good fit for both parties. Yet, rather than bringing the two sides closer together, energy interdependence has actually exacerbated tensions and given rise to new security and relative gains concerns. According to Tatiana Romanova, 'The idea of mutual dependence (with Russia being interested in the security of demand and the European Union pursuing the security of supply) has failed to play its part.'[76] Both sides have been unable to use the situation of interdependence to develop deeper cooperation. They find it difficult to accept dependence – even though they recognize that dependence is mutual and that cutting off cooperation would incur unacceptable costs for both

sides. Because of their uncertainty about the future, both sides are wary that, what is currently a relationship of symmetrical interdependence may become one of symmetrical dependence. As a result, each side has taken steps to lessen their dependence on the other. This awakens fears that the relationship will move from being one of symmetrical to becoming one of asymmetrical interdependence: that is, that one side will be less dependent on the relationship than the other and will use this dependence to take advantage of the other side. As a result energy relations are increasingly securitized. '[E]energy relations are taken out of the context of normal politics, which is not compatible with the construction of a larger energy market between Russia and the EU.'[77]

Moreover, Russia and the EU have not achieved a relationship of complex interdependence that would alleviate concerns about the energy relationship moving from one of symmetrical to one of asymmetrical interdependence. In situations of complex interdependence, interdependence is dispersed along a variety of different dimensions and it is difficult to surmise which side is more dependent. Symmetry is more robust as any change in one area that may produce asymmetry can be offset by other areas where interdependence between the two sides exists. In the absence of complex interdependence, the two sides must be more concerned that the relationship will evolve in such a way that one side will become more dependent on the other and that this dependence will be used against them by the other, less dependent, side. States caught up in this kind of relationship will be tempted to increase their security by finding ways to decrease their dependence. But in decreasing their dependence they also increase the dependence of the other side and threaten its security. Liberal theories predict that interdependence will alleviate both sides' security concerns and decrease conflict. But under circumstances where interdependence falls short of being complex, it actually serves to heighten security concerns and exacerbate conflict and security competition.

The experience of EU–Russian energy interdependence should help to dispel simple notions about the salubrious effects that interdependence can have on relations between states. Interdependence does not always lead to improved relations and can exacerbate conflict and tensions, particularly in situations where interdependence revolves around sensitive issues that directly impact security (such as energy) or is focused on just one area and falls short of complex interdependence.

This finding is of more than just academic relevance. Russia–EU energy interdependence also holds important lessons for policy-makers as they formulate policies of economic engagement towards 'rogue states' such as North Korea and Iran. Russia and South Korea have entered serious discussion about establishing a natural gas pipeline from Russia to South Korea that would cross through North Korea. Proponents of the plan argue that this would help socialize the pariah regime in Pyongyang by giving it a clear economic stake in improving relations with the outside world.[78] But in the absence of other forms of economic engagement, the interdependence that such a project would create could give way to the same kinds of concerns about dependency that have plagued Russia–EU energy relations. Experts have also advocated the use of economic engagement to decrease tensions between the West and Iran and move towards resolving the long-standing nuclear crisis.[79] There is much

potential for developing economic interdependence in the energy field, particularly with Europe. But so are the dangers of repeating the Russia–EU experience. In both cases a successful policy of economic engagement would have to ensure that interdependence develops along a multitude of dimensions to truly work the way it is intended to. Building complex interdependence takes time. Policy-makers should thus be wary of any quick fix solutions that promise to immediately establish situations of interdependence that will alleviate conflict as these may actually have the opposite effect.

The Russia–EU energy relationship also holds some important lessons for America–China relations. In terms of economic interdependence American–Chinese relations seem to be developing in the direction of complex interdependence. With an annual total turnover of more than of USD 562 billion, the USA is China's largest trading partner and China is America's second largest.[80] The USA is a major source for foreign direct investment (FDI) for China, as is China for the USA. We usually think of bilateral FDI between the two countries in terms of American companies investing in China to take advantage of low-cost labour. But China's annual FDI in the USA actually exceeds FDI by American companies into China, as Chinese companies now have the capital to make major investments in the USA.[81] Moreover, China holds more than USD 1 trillion in American debt, making it the largest foreign holder of American debt. Its willingness to continue to buy US Treasury bills is essential to American fiscal and budgetary health.

Nevertheless, the relationship is not without its problems. Many in the USA complain about America's growing trade deficit with China and are deeply concerned by the level of indebtedness to a potential geopolitical rival. This has led to calls from some quarters to get tougher on China and reduce America's exposure in these areas.[82] In the future, high-profile Chinese investment may lead to resentment and calls for investment restrictions, as was the case with Japanese investment in the USA in the late 1980s and early 1990s. For their part Chinese worry about holding so much American debt. Some Chinese analysts believe free-spending American fiscal and budgetary policies are whittling away at their investment and they are calling for China to diversify its lending portfolios away from dollar-denominated debt.[83]

Moves to reduce dependence in these areas may alleviate American and Chinese fears and vulnerabilities. But they may also jeopardize the relationship of complex interdependence that is evolving between the two countries. Liberal theorists have long argued that economic interdependence will play a constructive role in limiting conflict between the USA and rising China.[84] Yet if this interdependence lacks complexity and is restricted to only one issue area, such as trade, the USA and China may find themselves in the same kind of security dilemma situation that has poisoned EU–Russian relations.

Policy-makers who want to use interdependence to forestall the development of security rivalries between the USA and China must fight to preserve all facets of interdependence and resist the calls of those who want to cut ties. They cannot afford to be complacent. Interdependence in one area – even if in such an important issue area as trade – will not guarantee peace and may only serve to heighten

suspicions and tensions between the two powers. Building relationships of complex interdependence takes time, effort, and the investment of considerable political capital. Despite the good will of European and Russian leaders and the experience of decades of interdependence in the energy field to build on, Europe and Russia made little progress in making their relationship truly complex. Policy-makers must be fully aware of just how difficult it is to make interdependence truly work and recognize the pitfalls that are inherent to situations where interdependence is not complex, before they embark on the process of using interdependence to improve relations between them and potential adversaries.

## Postscript Ukraine: Can Decreasing Energy Interdependence Improve EU–Russian Relations?

While energy interdependence has exacerbated conflict between Russia and the European Union (EU) in the lead up to the current crisis in Ukraine, it may play a moderating role now that the crisis is underway – keeping it from further escalating out of control to the point of armed conflict between Russia and the West. Eric Gartzke argues that the inverse relationship between economic interdependence and military conflict stems not from the way it affects each sides' cost calculus about the utility of going to war (as many theories of interdependence argue), but from the way interdependence improves states' ability to signal their resolve in a dispute, making the kinds of miscalculations that often lead to war less likely to happen.[85] If the conflict in Ukraine continues to escalate, interdependence may make it easier for EU states to signal their resolve by threatening to break off energy ties with Russia. This could be crucial in future crisis situations as it would give both sides a better picture of the other's intentions and willingness to use military force. On the flip side, however, critics of the Western response to Russia's Ukraine policies point out that the failure to respond more decisively to Russia's policies in Ukraine also sends a clear signal about Western countries' lack of resolve, encouraging further aggressive behaviour on the part of Russian leaders and by other potential revisionist powers in other regions.[86]

In the longer term, larger global developments may decrease Europe and Russia's mutual energy dependence. The shale revolution has created a supply gut on world natural gas markets. As Europe begins to develop its liquid natural gas (LNG) infrastructure, it will be less vulnerable to supply cuts from Russia, as these can be made up with LNG imports from North America and the Middle East. Russia is also gradually becoming less dependent on European markets as it expands energy sales to Asia (most notably to China). Before the current crisis in Ukraine, there were signs that these larger trends towards decreased interdependence were having a positive effect on EU–Russia relations, and alleviating both sides' security concerns in the energy sphere. The EU had largely abandoned the Nabucco project and had adopted a much more tolerant stance towards Russian projects such as South Stream. For its part, Russia had begun to show more flexibility on natural gas pricing (even offering substantial discounts and renegotiation of long-term contracts)

and a willingness to offer third-party (including European companies) access to its pipeline systems.

Unfortunately, relations have moved back to mutual suspicion and conflict due to the crisis in Ukraine. The European Commission has renewed its opposition to South Stream, leading Russia to abandon the project. Russia has hardened its stance on pricing in recent negotiations with European customers and has cut off gas deliveries to Ukraine, claiming non-payment. It will be interesting to see whether this trend towards relations improving as interdependence decreases will resume if and when the crisis in Ukraine is resolved. Such developments would constitute additional evidence for the main arguments made in this article about the potential negative effects that economic interdependence can have in situations where the relationship of interdependence falls short of being complex.



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