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Original research article

Does natural gas fuel civil war? Rethinking energy security, international relations, and fossil-fuel conflict

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ABSTRACT

This article advances theoretical and empirical knowledge at the nexus of energy politics and conflict intervention by analyzing the complex dynamics connecting energy resources, civil war, and outside state support of rebel groups. It focuses on the role of global energy supply competition in states' decision to support armed groups that are involved in conflicts in other states. Further, this study enhances the extant research that focuses primarily on the resource wealth of conflict-ridden states by analyzing the effect of the interveners' resource wealth on their sponsorship of foreign non-state armed groups. This study identifies two causal paths linking energy resources, specifically natural gas, to state support of rebels by building on outside state supporters' motives for: (1) competition over supply to global markets; and (2) secure access to resources and supply routes. The empirical section includes a large-N analysis on original data covering 454 rebel groups and their state supporters and a detailed case study of the Russian intervention in Crimea and Eastern Ukraine.

1. Introduction

On 2 November 2015, due to the increased hostilities between Ukrainian security forces and Russian-backed separatists, Royal Dutch Shell abandoned its exploration for extractable shale gas in the Kharkov and Donetsk regions of Ukraine. The project had resulted from a 50-year agreement to explore the Yuzivska Field, located near areas of heavy fighting. Shell's withdrawal was perceived as a silent victory for Russia, which has experienced significant problems with Ukraine over the transportation of natural gas to the European markets.

Similarly, many argue that the Syrian conflict is fueled by competition between Qatar, Iran, and Russia over energy transit routes. In 2009, Syrian President Bashar al-Assad refused to sign an agreement allowing Qatar to transport natural gas from its North Field to Europe via pipelines passing through several countries, including Syria. This agreement presented an opportunity for the diversification of natural gas suppliers, thus undermining Russia's position as the major supplier of natural gas to Europe. Instead, the following year, Assad signed an agreement with Iran to build pipelines across Iran, Iraq, and Syria [1]. This new alignment was a major blow to Qatar, which owns the world's third largest natural gas reserves, behind Russia and Iran.

In both examples, outside states, i.e. Russia, Qatar, and Iran, intervened in the internal conflict(s) of a state located on potential transit routes for their natural gas distribution network. Both cases also

illustrate an understudied dimension of external intervention: competition among resource-rich states over the supply and distribution of energy resources, namely natural gas, to international markets.

This paper advances the study of conflict and third-party interventions in view of rapidly changing global energy dynamics. Until now, the literature on the link between conflict and natural energy resources has mainly focused on the role of oil. Extensive studies show how oil fuels conflict both in the domestic and international realms in several ways: states try acquiring oil reserves by force; oil facilitates domestic repression by autocratic leaders; and oil revenues help financing armed groups in civil wars [2–7]. This study, however, explores the relationship between conflict intervention and the quest for control over natural gas resources and secure access to supply routes.

Conventional research considers a country “resource dependent” when it relies on natural resource exports as its major source of revenue. Countries could also be considered resource-dependent if they have energy-intensive sectors that depend on imported resources or the uninterrupted flow of energy supplies from abroad. Thus, to clarify the terminology, this paper will refer to the first type of resource-dependency as “export-dependent” and the second type as “import-dependent.”

We argue that the analysis at the nexus of energy and international conflict or cooperation must adapt to changing global dynamics. As climate change creates increasing challenges, the world energy markets

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are undergoing a massive transformation. Nations and industries are striving to decrease their reliance on fossil fuels and to change their energy portfolios. Today, even the Gulf countries, whose economies rely heavily on revenue from natural resource exports, acknowledge the need for diversification, not only in their own energy mixes, but also in their economic revenue streams [8]. According to the International Energy Agency's projections, global energy need is expected to increase by 30 percent in 2040 and natural gas, renewable resources, and enhancements in energy efficiency are projected to be the leading sources and strategies in meeting this energy demand [9]. The high flexibility and sustainability of natural gas is increasingly turning it into the preferred energy choice, complementing intermittent renewables.¹ As a concrete signal of these projections, in 2018 natural gas consumption increased by 4.6%, unilaterally accounting for nearly half of the increase in global energy demand [11].

Recent Covid-19 pandemic related developments and their adverse implications for the energy sector are expected to further increase the role of natural gas and energy competition in international security and conflict. Highly volatile energy prices will intensify competition among suppliers while import-dependent states will try harder to protect their energy security. How will these trends affect gas-exporting and gas-importing countries? Will they generate more aggression or promote cooperation over existing extraction facilities, supply routes, and explored reserves? These are crucial puzzles with significant theoretical and policy implications. Therefore, this study expands analysis of third-party intervention into civil conflicts to include a particular focus on natural gas trade and competition.

The extant research on external state intervention in internal conflict focuses on the strategy and motives of interveners. Third-party states occasionally face a choice to intervene on either side of a conflict, i.e. government or rebel side. In this context, our research specifically focuses on the implications of third-party state support to armed rebels as an international conflict-inducing behavior, and we aim to assess the role energy competition and energy security related issues play in instigating such support. This is mostly because support of rebels against one's rival or enemy has increasingly become the dominant mode of interstate conflict in the post-Cold War period [12–14]. Indeed, this indirect form of fighting has been characterized as “new war”, i.e. low-scale armed conflict initiated by non-state armed groups that routinely attack civilians [15].

Our goal is to enrich the way we think about and operationalize interstate conflict to capture more nuanced causal mechanisms related to broader questions linking energy and international security. The motives behind supporting rebel groups are often related to either political factors, such as inter-state rivalry; ethnic ties; conflict contagion [13,16,17]; or economic incentives, such as resource wealth and the opportunity to access these resources through cooperation with rebels [6,18–21].² However, this extensive work on resource wealth and civil war has yet to generate scholarly consensus on causal mechanisms linking the two. Therefore, in this paper, we not only focus on the resource wealth of conflict-ridden states as a major explanatory variable but also provide a novel perspective by exploring the implications of the interveners' resource wealth. This framework enables us to capture the mechanisms by which competition over the supply of and access to resources influence interstate relations, building upon the literature about the influence of resource wealth on interstate conflict [22,23].

We argue that resource-rich interveners prioritize secure access to world markets since they need to export their products. Therefore, once an internal conflict breaks out in a state, especially if transit routes for natural gas pipelines are at stake, the instability caused by civil war might jeopardize this secure access, driving external states to intervene

[24–28]. If the conflict-ridden state is also a resource-rich state, competition logic will further incentivize external states to intervene on the side of the rebel group. This intervention aggravates the conflict, thus jeopardizing the conflict-ridden state's access to world markets and enhancing the intervener's competitive advantage. When gas pipelines run through the conflict-ridden state, having close ties with rebels might enhance interveners' control over these pipelines (secure access logic). One should keep in mind that secure access to global markets is a desirable energy security strategy both for export-dependent and import-dependent countries.

This potential access to natural gas reserves (of the conflict-ridden state) with projected extraction/supply capacity and the possibility of consolidating control over supply routes could trigger outside third-party support of rebels. For instance, the Russian annexation of Crimea was a clear coercion strategy aimed at the direct control of resource-rich territory (with high potential reserves) as well as transit routes. We argue that while energy related issues were not the primary factor triggering the Russia-Ukraine conflict, they played an important role in exacerbating it. Other compelling research supports this argument, highlighting how Crimean energy reserves and access to Ukrainian pipelines to Europe critically shaped Russia's foreign policy [29].

In contrast, if an intervening state is import-dependent, it would likely refrain from a strategy that contributes to further instability once an internal conflict breaks out within the borders of another state, especially if this state is located nearby. Although it is possible to transport natural gas in liquefied form in a way less prone to disruption, the transformation from gas to liquefied gas, the shipping and re-gasification in the importing country requires high technology terminals with storage and regasification facilities. This makes it a costlier option than building pipelines in the current context [30]. Accordingly, transporting conventional natural gas requires infrastructure and stability in the region. Hence, under specific circumstances pipeline politics could also deter import-dependent states from supporting rebels, since such intervention could jeopardize secure access to energy resources. This anticipation is also in line with emerging research that energy could induce international cooperation rather than conflict [31–33].

Within this framework, Section 2 of the article examines existing research on the nexus of natural resources, civil war, and interstate relations. Section 3 presents the theoretical framework and hypotheses about how energy resources instigate or impede outside state support of rebel groups. Section 4 explains the research design, followed by empirical analysis and findings. Section 5 further elucidates the empirical findings and causal mechanisms through a case study of Russian support of rebels in Ukraine.

2. Extant research on energy resources, conflict and international relations

Natural resources, such as oil and gas, frequently trigger conflict within and among states. Individuals, ethnic groups, and governments often approach control of scarce resources through the lens of a zero-sum game. Competition over the control, ownership and secure access to such resources easily escalates into conflict. Scholars of International Relations have examined both the conflict and cooperation-inducing aspects of this competition. Yet mixed and contradictory empirical evidence has prevented scholars from determining a clear causal link from natural resource competition to international conflict or cooperation [3,22,23,33–35]. “Energy's impact on security is more complex than we generally imagine,” as Nance and Boettcher argue when they address the connection between “energy, energy security, and energy and security” [36: 4].

In recent years, secure access to energy resources emerged as a foreign policy priority for states. Energy security is simply defined as “protection against the loss of welfare that may occur as a result of a change in price or availability of a strategic source” [37: 2]. The

¹ For a detailed review of the operational flexibility and emissions of gas-fired power plants please see Gonzalez-Salazar, Kirsten and Prchlik [10].

² See Ross [18] for a detailed review of this literature.

sustainability dimension of energy security is also becoming increasingly important. Within the context of energy security, China has recently invested heavily in inland infrastructure to import Russian and Central Asian oil in order to bypass a possible future US blockade that could reduce Chinese oil imports by 90% [38: 184]. Geopolitics is a major externality, which influences energy security for every state [24,39,40]. Accessing energy resources has emerged as one of the main energy security challenges in the modern world [41–43].

Whether energy interdependence fuels interstate conflict or cooperation was examined from the perspective of two historically rival theories in the field of IR. While realists emphasize the role of geopolitics and conflict-inducing competition (i.e. energy resources are concentrated in certain parts of the world and not every state has equal access to these resources), the liberal approach argues that energy interdependence might foster cooperation among states.³ Wilson [41] argues that both approaches fall short of capturing the multiple dimensions of a state's energy policies. He suggests that domestic and international political developments influence whether energy security becomes a politically salient issue for a state's security. Wilson asserts that a state is more likely to perceive "energy security as an existential threat to state interests insofar as energy resources critically impact its economic interests, regime survival and/or geopolitical security" [41: 114, 118]. From this perspective, intrastate conflicts influence a state's perception and anticipation about risks posed to its secure access to energy resources [24,27,28].

Energy security has critical implications for states' survival, the key foreign policy objective of every state according to mainstream IR theories, such as realism and liberalism. Both export-dependent (producer states) and import-dependent (consumer states) might perceive an indirect threat to their security, if their access to global markets and supply routes are jeopardized or if system-level shocks cause fluctuations in oil and gas prices. Civil conflicts have been one of the major reasons behind such indirect threat perception and the increasing securitization of energy policy in recent decades. These conflicts threaten energy security either through instability endangering secure access routes or armed groups directly attacking energy infrastructure. Since the 1990s, militants and terrorists have increasingly targeted energy infrastructure [26]. Such attacks imperil energy security, bearing significant economic consequences. For example, in July 2016 the Islamic State attacked the Bai Hassan oil station in Northern Iraq, subsequently halting all activity at the station which produced 55,000 barrels of oil every day [26: 7].

Therefore, one would expect that third-party states would not seek to prolong civil wars. But research shows that almost half of the armed groups that emerged in the post-1945 period was supported by third-party states through weapons and financial aid, significantly extending the duration of civil wars [14,16]. Although a significant body of research has accumulated about states' decisions to intervene, on whose side to intervene [44], and what kind of instruments to use, e.g., diplomatic or direct military intervention, previously explored causal mechanisms are surprisingly limited to security-related incentives [12,21,45–52]. One recent exception is the work of Aydın [53], who examines the influence of liberal ideology on intervention abroad by focusing on US foreign policy. The oft-cited political motives include, but are not limited to, utilizing armed groups as proxies to settle longstanding issues with rivals, containing the conflict to prevent civil war contagion and the spread of instability in the international arena, helping *trans*-border ethnic kin, and offering humanitarian aid [12,14,17,54–56].

Some scholars have highlighted the impact of natural resources on the decision to intervene, but their focus remains on the natural resources of conflict-ridden countries, rather than the resource wealth of

the interveners [19,21,57,58]. A compelling recent study focuses on rebel groups' access to natural resources and examines outside states' motives for supporting rebels in resource-rich states [21]. It shows that states are more likely to support rebels who have access to lootable resources. Furthermore, rebels with control over lootable resources are more likely to succeed toward their target governments. Therefore, since rebel victory is more likely, outside states are willing to side with them hoping to take advantage of post-conflict resource extraction.

In general, resource-rich countries are more prone to experience civil conflict since acquiring the control of natural resources creates both motivation for the armed conflict and capacity for the rebels to sustain their operations [59–65]. Multiple other studies show how resource rents affect the intensity and duration of civil conflict [2,5,50,66]. Recent findings offer fresh perspectives in this regard: Wiegand and Keels argue that future access to postwar oil wealth leads the governments to offer concessions to rebels and shorten the duration of civil wars [67]. On the other hand, Conrad et al. find that civil conflicts last longer only when rebels can smuggle natural resources and exploit them to strengthen their power to resist [68].

Similarly, Bove et al. examine the role of demand for oil by a state in its decision to intervene, yet its focus remains on the oil reserves of the state targeted for intervention [58]. They find that oil proves significant when a conflict-ridden country has large oil reserves and potential interveners have a high demand for oil. Humphreys argues that external interveners are more motivated to stop conflicts if their access to natural resources is at stake [19]. Following this causal path, we argue that external supporters' dependency on imported resources plays a significant role in their decision to support rebel groups.

These studies exhibit two major limitations. First, most of them uniquely focus on oil, missing recent developments about natural gas and its securitization in interstate relations. Second, their focus remains on the natural resources of conflict-ridden countries, rather than the resource wealth of the interveners. This research aims to address these two gaps.

3. Theoretical framework

In order to identify the causal pathways from natural gas wealth to supporting rebels, we build on two main bodies of research: (a) external state support of rebels and (b) the relationship between states' policies to achieve energy security and international security. When we bring insights from these separate, but highly interrelated, bodies of research together, it is possible to develop more nuanced causal linkages from energy to interstate security. Considering that supporting rebels is an indirect form of conflict, resource-wealth can motivate states to support rebels especially if the conflict-ridden state hosts transit routes or is likely to be a competitor for supplying the global markets with specific types of resources.

We will start presenting our theory by identifying the actors in a typical internal conflict. An opportunity to support an armed rebel group emerges with the onset of internal conflict within the borders of a state. Conventionally, in internal conflicts there is a government side and a rebel side, which pursues administrative and/or territorial objectives against the government in question. The conflict-ridden state is the target of the violence by a given armed rebel group. When a conflict breaks out in a state, third-party states are presented with an opportunity to support a side. These states are called potential supporters. For instance, the recent support for both rebels and government by different actors in the Libyan conflict and its links to the competition concerning newly discovered Mediterranean gas presents a particularly interesting case. The ongoing crisis in Libya as well as the Mediterranean energy competition has pulled in regional actors, such as Turkey, Greece, Russia, Egypt and Israel. Each of these actors has allied with either the Government of National Accord (GNA) or the Libyan National Army (LNA), a group of former Libyan soldiers led by Field Marshall Khalifa Haftar. Each external supporter has its own motives that shape their

³ For a detailed analysis of the literature on how major theories of IR study energy-related issues among states, see Wilson [41].

decision to intervene and use their support for a particular side trying to secure access to energy resources and routes.

Whether a potential supporter turns into an actual supporter of an armed group is a function of several factors including but not limited to the presence of an ongoing dispute or rivalry between targets and supporters, ideational or ethnic ties between supporters and armed groups, and/or geographical proximity between targets and supporters [14,69]. We argue that the decision to provide support to an armed group is also influenced by whether or not a potential supporter or third-party state is resource-rich. In this paper, we specifically focus on the natural gas wealth of potential supporters. Furthermore, it also matters whether a conflict-ridden state is resource-rich or not. The existing research already finds that natural resources, particularly oil, instigate internal conflict in several ways.⁴ Third-party states occasionally try controlling oil reserves by violent intervention, oil revenues are used by autocratic leaders for domestic repression and help financing armed groups in civil wars [2–7]. More detailed accounts of causal linkages find that unequal distribution of natural resources is a leading cause of conflict within resource-rich countries since it induces rent-seeking behavior by some groups within the society [71]. Furthermore, intrastate competition over the exploitation of natural resources increases the likelihood of violent civil conflicts [6,7,72,73].

Table 1 presents our proposed causal mechanisms regarding the decision to intervene in another state's internal conflict based on two dimensions: (a) if a third-party state is export-dependent or import-dependent and (b) if a conflict-ridden state is resource-rich or not. We also consider the need for secure access to supply routes for both import and export-dependent third-party states. We argue that the variation on these dimensions triggers different foreign policy strategies and causal mechanisms linking energy (in)security to supporting a foreign rebel group.

For natural gas producers, it is crucial to be a reliable exporter and meet demands in a timely manner. For example, Russia must maintain its reputation as a reliable supplier of natural gas. Nevertheless, oil or natural gas may also be used as a coercive tool against a customer [24,38]. The rise of a rebel group in a target state with which a third-party (producer) state has some contentious issues presents an opportunity for achieving the desired objectives in the conflict-ridden state. Indeed, the producer can use it as a substitution strategy; i.e. rather than using gas directly as a weapon, it can support the armed group to gain long-term leverage. Moreover, the support of the rebels in a rival exporter can destabilize the rival's reliability as a supplier. Hence it can potentially increase the market share of a supporter state. Accordingly, if the potential supporter state and the rebels' target are both resource rich, then the likelihood of state support increases. Market competition and pursuit of monopoly incentivize this aggressive foreign policy behavior. This is the causal mechanism S1 in Table 1.

We posit three hypotheses in line with the scenarios presented in Table 1:

H1: Being a natural gas-rich state increases the likelihood of supporting rebel groups that fight other gas-rich states (since it reduces the targeted state's ability to compete).

If a conflict-ridden state is also resource-rich, aggravating the conflict by supporting rebels might help hindering the targeted state's ability to compete. The literature on oil and international and regional security has found that power struggle over oil wealth can pose serious

risks for regional cooperation [25: 410]. We also know that attacks on energy sectors and transport infrastructure are important strategies for militant and terrorist organizations [26]. Internal conflicts can further disrupt energy markets, since energy supply chains can become attractive targets for militants and terrorists [24]. Given this background, it is puzzling that a supplier would further aggravate internal conflicts in general. Yet, the opportunity to control actual and potential resource reserves in a competitor conflict-ridden state by supporting armed rebels motivate producers to support armed groups enabling the sponsor to dominate international supply channels. For instance, although Ukraine currently depends on energy resources from Russia, the vast natural gas reserves in the Crimean Peninsula, as well as the shale gas reserves in Eastern Ukraine, could make Ukraine energy independent in the future and a potential competitor with Russia in the energy sector.

Furthermore, if a resource-rich state depends mostly on export revenues of its resources to buy domestic support to minimize dissidence, then one would anticipate such states to be more likely to support rebel groups to handle their foreign policy-related objectives. This is mostly because support of rebels is a relatively cheaper strategy than direct armed intervention when trying to reach specific foreign policy objectives. It allows export-dependent states to spare resources to consolidate their base of support rather than allocating them to defense-related sectors. This contrasts with the findings of some recent empirical work that petro-states are more likely to use direct armed intervention or force abroad [23]. Indeed, these states could economize more resources if they support proxies rather than directly engaging with their enemy.

In the second scenario, we argue that resource-rich third parties will support rebels that fight against resource-poor target states if the latter's territory includes important transit routes potentially jeopardizing the third-party's secure access to global markets (S2). One of the reasons why Russia assisted rebels in Eastern Ukraine was its desire to strengthen its control of supply routes to its European consumers.

H2: Natural gas-rich states are more likely than non-natural gas-rich states to support armed groups against resource-poor states if conflict-ridden states are located on resource supply routes.

Resource exporting states prioritize control over pipelines and transit routes in order to consistently deliver to customers. Civil wars along supply routes could disturb this safe access. The emergence of rebel groups in a potential transit route state presents an opportunity for a resource-rich state to use its support as a leverage over the transit state. To illustrate, since direct invasion to secure access to resources or to keep supply routes under control is too costly [35], Russia chose to support rebel groups in Crimea and Eastern Ukraine to ensure rebel control over resource rich lands and also to use as leverage against Ukraine. Energy-related calculations created additional incentives for Russian intervention. If the intervening state aims to consolidate control of supply routes and/ or potential energy resources, then a resource-rich state may provide support to rebels. Supporting rebels allows the supporter suppress competition or to prevent the conflict-ridden state from obstructing the supporting state's access to supply networks (S2). A resource-rich, export-dependent state makes calculations to secure access to global markets and to maintain its dominance over the supply of these markets. We further elaborate this scenario in our case study of Russian interference in Ukraine.

In the second part of Table 1, we predict the behavior of import-dependent third-party interveners. Similar to export-dependent states, import-dependent state supporters base their calculations on secure access to resources. Energy networks generate a diversity of interconnections and vulnerabilities between states, increasing the strategic importance of secure pipeline access in foreign policy considerations. Although natural gas and oil discoveries may create new opportunities for potential regional economic cooperation, they can also cause additional regional instability [30]. Each of these puzzles render import-dependent states vulnerable to national and regional conflicts.

H3: Import-dependent states are less likely than non-import-dependent

⁴ The research on oil wealth and natural resources encouraging internal conflict has grown significantly in recent years. We are presenting some examples in the body of the paper. Some other works include Paine [70] and Basedau and Roy [59]. Paine finds that oil-rich regions with capital-intense, geographically concentrated, and immobile oil production are more likely to fight separatist civil wars relatively frequently. Basedau and Roy conclude that resource deposits and lootable resources fuel violence unless ethnic groups living in resource regions are politically included.

Table 1
Export and Import Dependence and Support for Armed Groups.

		CONFLICT-RIDDEN (TARGET) STATE	
		RESOURCE-RICH (Export-Dependent)	RESOURCE-POOR (Import-Dependent)
THIRD-PARTY (SUPPORTER) STATE	RESOURCE-RICH (Export-Dependent)	S1: A third-party resource-rich state is more likely to support rebels since it improves its competitive advantage and enables the intervener to gain control over energy resources.	S2: A third-party resource-rich state is more likely to support rebels if a conflict-ridden state is located on the transit routes for natural gas pipelines or have built-in pipelines to be controlled.
	RESOURCE-POOR (Import-Dependent)	S3: A third-party import-dependent state is more likely to support rebels in a conflict-ridden resource-rich state with lootable resources.	S4: A third-party import-dependent state is less likely to support rebel groups if this strategy jeopardizes secure access to supply routes.

S: scenario.

states or states with less resource-intense economies to support rebels in cases where conflict-induced instability would hinder access to supply routes.

If a supporter depends on imported resources, supporting rebels is not a viable option in general, because such support would fuel instability in the region and jeopardize secure access to supply routes. This is referred to as S4 on Table 1. We already know from existing research that supporting rebels makes conflicts endure longer [16] and prolonged internal conflicts disturb regional and international stability. Although previous research clearly shows how third-party states behave toward conflicts within resource-rich states, we don't know much about how energy security related concerns drive import-dependent third parties' behavior. If a supporter is import-dependent and the conflict-ridden state is resource-rich (S3), it might choose to cooperate with rebels especially if rebels have control over lootable resources. Extant work shows that resource-rich states attract outside supporters once they experience internal conflict [20,21,48,74,75]. Therefore, since the theoretical implications of scenario three (S3) have been examined extensively in existing work, we focus on the behavior of import-dependent states toward resource-poor countries' conflicts when the target state is located on energy supply routes (S4).

Some empirical findings also consider the role of bilateral trade ties and economic interests on a state's decision to intervene in a civil war [53,76]. In today's world, global energy supply networks represent an important component of trade ties, especially between resource-rich countries and import-dependent countries. Thus, the stability of energy markets and supply security has become more crucial than ever [19]. Import-dependent states will be reluctant to support rebels since, eventually, such behavior contributes to long-term regional instability. Ultimately, violent conflicts threaten not only international security [20], but also the importers' access to uninterrupted energy supplies [20]. For example, import-dependent Jordan suffered tremendously from conflicts in its region, such as the Six-Day War, the Lebanese Civil War, and the First Gulf War, which endangered its secure access to oil and natural gas [24].

The empirical analysis and the case study presented in this article will enhance our understanding of states' behavior toward rebel groups by highlighting the significance of access to energy resources and control over supply routes. Do states view their support of rebel groups as a means to achieve access to resources? Or do they see rebels as disruptors of a secure supply? If both, what are the conditions under which these perceptions change? If the goal is to guarantee a secure supply of natural resources and energy, supporting rebels who have access to these resources might be a rational strategy, but if supporting them prolongs an ongoing conflict and jeopardizes the uninterrupted flow of natural resources, then supporting rebels emerges as a counterproductive strategy.

4. Research design and empirical analysis

In formulating our research design, we started by determining the set of relevant observations. Since the opportunity to support a rebel

group exists as long as there is a rebel group targeting a specific state, we select all the cases in which a state was violently targeted by a Nonstate Armed Group (NAG) in the period between 1946 and 2010. Since data on the key independent variables are available only for the period between 1980 and 2010, the empirical analyses are limited to this period. A NAG can be an ethnic or religious insurgency, a terrorist group, or a group of rebels who pursue some political objective(s) through violent means [55]. We use the UCDP/PRIO Armed Conflict Dataset to determine the population of internal conflict cases [77,78].

The unit of analysis is a dyad-year, including a target state that is the subject of a violent uprising at any time in the period between 1980 and 2010, and a potential supporter state for the associated rebel group. We identified a group of potential supporter states by relying on the Politically Relevant International Environment [79,80]. Based on this framework, a politically relevant group (PRG) of a state—target state for the purposes of this paper—includes geographically contiguous states, regional powers, and global powers whose influence extends far beyond their regions.⁵ In the end, each state targeted by a rebel group is paired with each state in its politically relevant group.⁶ The dataset is cross-sectional and time-series, providing information for each dyad of countries across both space and time.

4.1. Dependent Variable: External State Support for Rebel Groups

We used the NAG dataset to identify cases of external state support for rebel groups [14,82]. In comparison to several other datasets on outside state support,⁷ NAGs data has the following advantages. First, it encompasses a broader time span than other available datasets and support is coded as a time-variant variable. Second, support is coded for each supporter state, rather than coding per conflict. Third, it is possible to aggregate the number of groups supported by each state on a yearly basis.

The NAGs dataset codes nine types of external support for rebel

⁵ Maoz [80] and Maoz & Russett [79] talk extensively about the criteria to identify politically relevant dyads. In addition, Maoz [80] identifies pairs of indirectly contiguous states that share a colonial or imperial past. See pp. 122–3 in Maoz [80] for a detailed explanation of political relevancy. See Lemke and Reed [81] for a comparison of the statistical results for conflict analysis, using all the dyads in the world and politically relevant dyads. They conclude there are no significant differences across findings and using politically relevant dyads makes statistical research with a large population of cases manageable.

⁶ There are some disadvantages to using politically relevant dyads. For instance, Saudi Arabia has supported various ethnic groups within Afghanistan. In the dataset, this information is not included, as Saudi Arabia is not a member of Afghanistan's politically relevant group. Yet the benefit of limiting the number of potential supporters to be examined for each rebel group exceeds the benefit of including every state.

⁷ Two other datasets on external state support of rebel groups are 1. NSA dataset [83] and 2. UCDP External Support Data. Neither dataset has information NAG dataset covers. See [82] for a detailed comparison of different datasets.

groups active at any time between 1946 and 2010: (1) safe havens for rebel group members; (2) safe havens for rebel group leaders; (3) training camps; (4) arms and logistical aid; (5) funds; (6) transport of arms, military equipment, and supplies; (7) training; (8) provision of offices; and (9) troops. In total, the NAGs dataset has information on 454 rebel groups and 84 state supporters. In the empirical analysis of this paper, external state support is coded as a binary variable, receiving “1” for any kind of support and “0” otherwise.

4.2. Independent Variables

The variables related to natural resources, including gas and oil, are adopted from the BP Statistical Review of World Energy [84].

Natural Gas Reserves: This indicator demonstrates a state’s total proven reserves of natural gas as a proportion of the entire world reserves in a given year. The reserves’ capacity is measured by “trillion cubic meters.” This data covers the years 1980–2016 [84]. We generated two separate variables for the natural gas reserves of target states and potential supporters. Furthermore, in some models, we use a binary variable indicating whether a country has natural gas reserves at all, since simply the presence of reserves can be more relevant for future power projections.

Dyad Natural Gas Reserves: This variable is calculated as the total gas reserves in the dyad (of target and supporter), as a share of total world gas reserves per year.

Natural Gas Production: This is the total production of natural gas in a state, as a share of the total world production in a given year. It is not possible to use a measure of reserves or production as a percentage of GDP, since the price of natural gas mostly depends on bilateral trade agreements between two states, so it fluctuates.

Dyad Natural Gas Production: This variable is calculated as the total gas production in the dyad (of target and supporter), as a share of total world gas production per year.

Net Energy Imports: Net energy imports represents the percentage of imported energy in the total energy usage (percent of energy use). The values are calculated based on energy use and production, measured in oil equivalents. The data is gathered from the World Bank, which describes energy usage as the “use of primary energy before transformation to other end-use fuels, which is equal to indigenous production plus imports and stock changes, minus exports and fuels supplied to ships and aircraft engaged in international transport” [85].

The dataset for this variable covers the period between 1960 and 2014. When the indicator value is negative, this means the country is a net energy exporter. As the share of imported energy increases in a country’s total energy usage, the country’s economy becomes more dependent on continuous energy imports. The level of this dependency is critical, since increased dependence on imported supplies of energy renders the import-dependent countries vulnerable to risks posed by exporter countries and crises in transit regions. Thus, a high percentage of net energy imports presents a challenge for a country’s energy security.

Energy Intensity: Identified as the “Energy intensity level of primary energy” by the World Bank, it is the ratio between energy supply and gross domestic product, measured using purchasing power parity. The indicator measures how much energy is consumed to produce one unit of economic output. Lower energy intensity scores mean less energy is used to produce economic output. Low energy intensity scores are also usually correlated with better energy efficiency records. The data used for our analysis is from the World Development Indicators and available data covers the years 1990–2012 [85]. We used this variable in Model 10 and kept the analysis limited to 1990 and 2010.

Rivalry: We generated a binary variable to measure whether or not potential rebel supporters are rivals of target state’s government. ‘Rivalry,’ in this context, refers to a specific form of hostile relationship between two states, defined as “two mutually psychologically hostile states that view one another as rivals and compete over an issue (or

issues) militarily in which past events affect present relations and there is an expectation of future contention” [86]. If potential supporters are involved in ideological, spatial, territorial, or interventionary rivalries with targets of rebels [87], we assign a value of “1.”⁸

Bilateral Trade Balance: Using Correlates of War (COW) Trade Data, dyadic trade balance is calculated as the proportion of imports into the supporter state from the target state in a given dyad, to the total imports in the dyad (total of imports into target from supporter and into supporter from target) [88].

Joint Democracy: Using the Polity IV dataset, we generated a “joint democracy” measure for each dyad, which generates a value of “1” if both states have a polity score higher than 6 [89].

Number of NAGs: Using the NAGs dataset, we generated a score for the total number of rebel groups a state supports in a given year [14]. It is a count variable, ranging from 0 to 7, the highest number of groups a state supported in a given year.

Potential Supporter Relative Strength: Using the Correlates of War (COW) composite index of national capabilities, we generated a ratio of a potential supporter’s strength to the total strength in each dyad, i.e. total strength of the potential supporter and target state in each dyad [90].

Distance: We also included a control for the logged distance between the capital cities of each state in a dyad.

Land Contiguity: We use the COW Direct Contiguity Dataset to code whether two states in a dyad share a land border, which is a binary variable [91].

Gas*Proximity: We generated an interaction variable to capture cases in which resource-rich supporters also share a land border with the target state.

The subsequent large-N analysis and case study present invaluable insights about the complex effects of dependence on energy exports and imports, secure access to natural resources, and competition over energy supply to global markets on external state support of rebel groups. In order to parse out causal mechanisms, we estimated three sets of models to capture: (1) the effect of export-dependence, (2) the effect of competition over supply of and access to energy resources, and (3) the effect of import dependence. Using binary logit analysis while controlling for temporal dependence, we created several models, using the Beck, Katz, and Tucker method [92],⁹ to test our hypotheses about the relationship between resource wealth and support of rebels.

We estimate the models by including the most frequently used variables in estimating inter-state conflict. Liberal scholars focus on the influence of joint trade and joint democracy in discouraging interstate conflict [94]. Interstate rivalry is conventionally treated to be the main explanatory variable for interstate militarized dispute onset. Indeed, 50% of all disputes with territorial rivalry turn into interstate armed disputes [95]. Finally, most models of interstate conflict include a control variable for geographical proximity. After including these established variables in the study of inter-state conflict, we estimated a set of preliminary models to establish that gas-rich states resort to armed groups as a foreign policy instrument granting a lower risk of a direct engagement with the target states of armed groups. Supporting rebels is a strategy to safely achieve a resource-rich state’s objectives without jeopardizing its status as a reliable energy supplier. Table 2 presents general and preliminary empirical findings from the regression of supporter resource wealth on binary support (any form of support), regardless of target state type (export or import-dependent).

Models 1 and 2 evaluate potential supporter’s gas reserves to predict

⁸ In interventionary rivalries, states intervene in the internal affairs of other states to achieve regime or leadership change or influence their decision-making [87].

⁹ We are aware of a new method offered by Carter and Signorino [93]. Yet, scholarship on civil wars has not, thus far, reported major differences between the estimated empirical findings from either method.

Table 2
Export-Dependent Third-Party States and Support for Rebel Groups.

	Model 1		Model 2		Model 3		Model 4	
	RESERVES				PRODUCTION			
	P > z		P > z		P > z		P > z	
Supporter Natural Gas	1.568*** (0.177)	0.000	1.795*** (0.221)	0.000	8.447*** (1.164)	0.000	8.875*** (1.269)	0.000
Bilateral Trade Balance	-0.0003 (0.0002)	0.150	-0.0003 (0.0002)	0.134	-0.000 (0.000)	0.228	-0.000 (0.000)	0.227
Land Contiguity	1.727*** (0.233)	0.000	1.870*** (0.268)	0.000	2.309*** (0.294)	0.000	2.396*** (0.318)	0.000
Rivalry	1.065*** (0.240)	0.000	1.063*** (0.240)	0.000	0.844** (0.308)	0.006	0.817** (0.314)	0.009
Joint Democracy	-0.621** (0.218)	0.004	-0.636** (0.213)	0.003	0.059 (0.243)	0.809	0.046 (0.243)	0.850
Total Number of Groups Supported	-0.166* (0.066)	0.012	-0.182** (0.065)	0.005	-0.497*** (0.116)	0.000	-0.496*** (0.118)	0.000
Gas*Contiguity	-		-0.630* (0.314)	0.045	-		-4.463 (2.286)	0.051
Joint Gas Reserve	-		-		16.612 (20.425)	0.416	16.567 (21.272)	0.436
Constant	0.340 (0.460)	0.46	0.357 (0.461)	0.439	2.388** (0.864)	0.006	2.343** (0.886)	0.008
R-squared	0.72		0.72		0.77		0.77	
N	33,598		33,598		21,953		21,953	

* p < 0.05, ** p < 0.01, *** p < 0.001.

the likelihood that it turns into an actual supporter. Models 3 and 4 do the same, but for gas production, by controlling for the effect of reserves. Both reserves and actual production of natural gas have a robust positive effect on the likelihood of supporting rebels. As a third-party state's natural gas reserves or its natural gas production increases, the state is more likely to support rebel groups, in general. This is a preliminary finding supporting our first hypothesis. This finding is also in line with the changing trends in the international arena with respect to increasing cooperation between states and armed groups [12,55,96].

Geographical proximity—sharing a land border—also has a robust and significant effect on the likelihood of supporting armed groups. Considering that such contiguous states are the potential transit routes for natural gas exports, this finding is also in line with the initial theoretical insights. Supporting rebels in states located on transit routes might help achieve influence in the borders of these states. To further unpack the effect of contiguity and dependence on gas exports, Models 2 and 4 include the interaction variables for gas wealth and land contiguity. Hypothesis 2 states that gas-rich states are more likely to support rebels in geographically contiguous states if this support facilitates more effective control over supply routes.

Although both natural gas reserves and contiguous land border separately have a positive effect on the likelihood of rebel support, after including the interaction variable (Gas*Contiguity) in Models 2 and 4, it seems to have a negative effect on the likelihood of support. This might seem contradictory given that Models 1 and 3 show positive effect of contiguity, which indicates a supporter's objective to control supply routes. The interaction is negative, seemingly signaling a supporter's motive to avoid instability in its immediate region since such instability would hinder its ability to attract investment as a potential manufacturer with gas reserves and supply global markets as a future exporter. However, if supporting rebels would guarantee control of supply routes or be used as a leverage against the target state, third-party states might choose to cooperate with rebels. Since we do not have large-N data on supply or transit routes for export-dependent states, we cannot directly test for these distinct causal mechanisms. Yet the analysis here provides some preliminary evidence for these two distinct mechanisms.

The empirical findings from these models require further elaboration on the complex linkages between resource wealth and inter-state

conflict. For this reason, we conducted further analysis to discern the effects of dependence on imported energy resources, and competition over supply to global energy markets, on states' behaviors toward rebel groups. We refine the empirical analysis by including a variable capturing the dyadic gas reserves and production as a proxy of supporter-target competition to better capture the mechanisms stated in our hypotheses. Table 3 presents these findings. Models 5 and 6 present the findings about dyadic reserve level, and Models 7 and 8 discuss natural gas production.

The first hypothesis identifies a causal mechanism related to competition over supply of global energy markets. Export-dependent, gas-rich, states compete over the supply of these resources to the global markets. The assumption is that the higher the dyadic level of gas reserves and production—in target states and intervener/supporter states—the greater the chance they compete to supply these resources through secure trade routes to world markets (H1).

The rise of a rebel group in one's resource-rich competitor is perceived as an opportunity by a gas-rich potential supporter. As mentioned earlier, such a strategy might give a supporter state a competitive edge since it could be used as a leverage when necessary against a target state. Since both the third-party supporter and the conflict-ridden state are export-dependent producers, supporting rebels might disrupt the competitors' exports especially if rebels have access to these resources. We found robust and strong support for the first causal mechanism in both reserve and production models—Model 5 and 7.

Across each model, competition drives states to support rebels in the borders of one's competitor, confirming H1. This effect disappears once we control for the relative strength of the supporter in Model 8. When both targets and supporters produce natural gas, the relative strength of the supporter seems to determine the likelihood of supporting rebels. Fearing retaliation, a resource-rich state is more cautious when deciding to support rebels fighting against another resource-rich state if the latter is relatively stronger than itself. This finding confirms coercive vulnerability logic: import-dependent states will seek to prevent the disruption of energy flows into their borders to the extent that they have military power to do so [38]. A similar logic is valid for export-dependent third-party states.

The findings in Table 3 seem to support H2 as well by offering statistically significant and robust findings for the effect of land

Table 3
Competition over Global Markets and Support for Rebels.

	Model 5		Model 6		Model 7		Model 8	
	RESERVES				PRODUCTION			
	P > z		P > z		P > z		P > z	
Competition (Joint Gas Wealth)	46.389** (16.081)	0.004	42.263* (20.690)	0.041	2.850* (1.420)	0.045	1.819 (1.243)	0.143
Bilateral Trade Balance	-0.000 (0.000)	0.128	-0.000 (0.000)	0.195	-0.000 (0.000)	0.224	-0.000 (0.000)	0.288
Land Contiguity	1.536*** (0.363)	0.000	1.700*** (0.380)	0.000	1.744** (0.560)	0.002	1.625* (0.716)	0.023
Rivalry	0.721* (0.305)	0.018	0.736* (0.305)	0.016	2.156*** (0.524)	0.000	1.765** (0.551)	0.001
Joint Democracy	0.020 (0.245)	0.934	0.156 (0.256)	0.541	-0.302 (0.401)	0.452	-0.199 (0.385)	0.605
Geographical Proximity	-0.082 (0.144)	0.567	-0.155 (0.143)	0.278	-0.413 (0.260)	0.113	-0.522 (0.282)	0.064
Total Number of Groups Supported	-0.625*** (0.102)	0.000	-0.569*** (0.113)	0.000	-0.602*** (0.176)	0.001	-0.680** (0.224)	0.002
Supporter Relative Strength	-		1.643*** (0.334)	0.000	-		2.952** (0.524)	0.000
Constant	4.648*** (1.356)	0.001	3.738** (1.435)	0.009	6.728* (2.645)	0.011	7.044* (3.045)	0.021
R-squared	0.75		0.76		0.82		0.85	
N	21,953		21,192		18,938		18,289	

* p < 0.05, ** p < 0.01, *** p < 0.001.

contiguity on support of rebels across all models. Sharing a land border has a positive effect on the likelihood that a gas producer will end up supporting the rebels in the country with which it shares a land border. This provides further evidence that resource-rich states base their calculations on their capacity to secure supply routes. Armed groups provide an opportunity for resource-rich states to gain leverage over the decision-making process of target governments. Extensive research has already shown that states support armed groups in order to acquire leverage over conflict-ridden states [54,69,97]. One could argue that land contiguity might also drive inter-state rivalry, which then causes support of rebels in one's rival. However, we have controlled for this in our model by including rivalry as an independent variable. Large-N analysis method allows us to control for such effects. Therefore, we can claim that even after controlling for rivalry as a major cause of state support, we still find a robust effect of resource-wealth on support of rebels.

Among the control variables, joint democracy and joint trade flow within dyads do not have a significant effect on the likelihood of support. The total number of groups supported by a given state reduces the likelihood of support, as expected. Additionally, inter-state rivalry is a primary source of conflict in world politics. Given that 80% of all inter-state warfare since 1800 occurred among rival states [95], it is not surprising that rivalry has a robust and positive effect on the likelihood of supporting rebels.

The hypotheses about the relationship between import-dependence and likelihood of supporting rebels build on arguments related to a states' economic incentive—securing uninterrupted access to trade routes with resource-rich states (H3). Models 9 and 10, in Table 4, show the effect of import-dependence on supporting rebels. Model 9 does not support H3, showing energy imports do not have a significant or robust effect on the likelihood of supporting rebels. Yet, once we control for the level of energy intensity of a country's economy, both imports and intensity become significant. This aligns with the proposed causal mechanisms between import-dependence and support of rebels. It seems that as one country's sectoral dependence on energy increases, and if required energy resources are imported, then the state is less likely to support rebels. This seems to support the idea that pipeline politics promote international cooperation rather than fuel conflict.

Table 4
Natural Gas Import Dependency and Support for Rebel Groups.

	Model 9 Import Dependency		Model 10 Energy Dependency	
	P > z		P > z	
	Natural Gas Production	-		-
Energy Imports	0.000 (0.000)	0.103	-0.002*** (0.000)	0.000
Energy Intensity	-		-0.050* (0.023)	0.028
Bilateral Trade Balance	-0.000 (0.000)	0.157	-0.001 (0.001)	0.158
Land Contiguity	1.041** (0.362)	0.004	1.638*** (0.456)	0.000
Rivalry	1.345*** (0.292)	0.000	1.573*** (0.403)	0.000
Joint Democracy	0.049 (0.253)	0.846	0.512 (0.292)	0.080
Geographical Proximity	-0.108 (0.149)	0.469	0.059 (0.173)	0.731
Total Number of Groups Supported	-0.652*** (0.108)	0.000	-0.340 (0.227)	0.135
Supporter Relative Strength	-		-	
Constant	5.201*** (1.422)	0.000	1.765 (1.999)	0.377
R-squared	0.77		0.73	
N	20,877		13,431	

* p < 0.05, ** p < 0.01, *** p < 0.001.

Import-dependent states are unlikely to jeopardize their access to energy resources by supporting rebels, who might undermine the regional and global stability required for the peaceful exchange of resources and foreign direct investment. This result provides further evidence for the explained incentives of import-dependent states to secure access to energy resources, since they rely heavily on outside states for their energy supply [20].

In the following case study, we further elucidate the causal mechanisms tested in the large-N empirical analysis and explore the

complex dynamics linking natural gas resources with outside state support for rebels.

5. Crossroads of energy and conflict in Eurasia: the energy dimension of Russian support for rebel groups in Crimea and Eastern Ukraine

The Russian annexation of Crimea in 2014 clearly illustrates the interactions between energy, conflict, and Eurasian pipeline politics. Power, territory, domestic-external linkages, and transnational ethnic dimension drove third-party support for the separatists in their fight against Ukrainian control. There was also an important energy component that provided Russia with additional incentives to fuel the conflict. Even today, Russia continues to support separatists in Eastern Ukraine.

However, we are cautious about not falling into the “trap of resource determinism” by arguing a direct and overemphasized link between energy resources and conflict highlighting energy as the primary source of conflict [98]. We acknowledge that the energy dimension was not the principal element catalyzing the conflict, yet we argue that it clearly aggravated it, increasing Russian motives for intervention. In their insightful study, Van de Graaf and Colgan [99] raise the counterfactual question, namely, whether Putin would still have annexed Crimea if it did not have energy resources. The response would probably be yes because of all the other factors stated previously. Nevertheless, Van de Graaf and Colgan also conclude that the “Ukraine crisis was not an ‘energy war’ as conventionally understood in the popular discourse, but energy did play a crucial role along several dimensions” [99,63]. They highlight important contextual factors such as price disputes with Ukraine and Russia’s predisposition to an aggressive foreign policy on account of its oil wealth.

We also agree that these aspects provided additional contextual reasons for Russian intervention. Yet, different from Van De Graff and Colgan’s study, we highlight competition for secure access to natural gas resources and transit routes as significant motives shaping Russian strategy. Russia highly prioritizes securing supply routes in Ukraine to ensure that its gas reliably reaches European customers [24,29]. Van de Graaf and Colgan [99: 62] also stress that Russia values its reputation for being a reliable gas supplier.

This case study particularly relates to Hypothesis 1 (H1) and Hypothesis 2 (H2) and supports the main findings of our article. In our article, by focusing on natural gas resources and their transit routes, we argue that resource-rich interveners attempt to secure safe access to international markets either by curbing competition through hindering or controlling alternative supplies and/or by exerting tighter control over supply routes. In our theoretical framework, we posited that when a conflict-ridden state is also resource-rich and/or located on the transit routes for gas pipelines, a resource-rich intervener perceives a potential opportunity with the emergence of a rebel group for two main reasons. First, resource-rich states support rebels to fuel an existing conflict in hopes that the rebel group will disrupt the conflict-ridden state’s secure access to international markets (competition logic). Second, intervening states might be more likely to support rebels if they think that rebels will help with the control of critical transit routes areas (secure access to transit routes logic). Thus, potential access to natural gas reserves with projected extraction/supply capacity and the possibility of consolidating control over supply routes is also reflected in the energy-related motives for Russian intervention into Crimea and Eastern Ukraine.

According to the official Energy Strategy of the Russian Federation for the period up to 2030, Russia expects high price volatility and intense competition over energy resources [100]. One of the main problems for Russia is export-dependence and extensive reliance on transit countries for pipeline routes to its European markets. In order to achieve the strategic objectives of its foreign energy policy, Russia outlined these critical goals: “appreciation of Russia’s national interests

in the developing system of world energy markets aiming at their predictable and stable development; diversification of export energy markets and export commodities structure; and enhancement of leading Russian energy companies’ positions abroad” [101: 57]. Utilizing social network analysis, Stulberg [102] compares successive gas wars between Ukraine and Russia since 2006, highlighting the wars’ implications for European energy security. He explores how the evolving European gas network provides new opportunities and constraints for coercive energy diplomacy [102]. Wilson also stresses the significance of energy securitization for states where “energy issues are implicated in economic, regime and/or geopolitical security concerns, and leads governments to adopt nationalistic policy frameworks that result in international conflicts over energy” [41: 114]. Multiple scholars have identified this nationalistic approach to energy as contributing to interstate energy competition [41,43,103]. Russia presents an illustrative case of how high levels of securitization leads to nationalistic policy frameworks that fuel conflicts. Hence, energy politics is increasingly intertwined with Russian foreign policy maneuvers and engagement with and support of rebel groups.

The maritime zone of the Crimean Peninsula has rich offshore natural gas reserves, enhancing its geopolitical significance. Moreover, one of the main routes (along with North Stream) for the transit gas pipelines linking Russia to the European Union passes through Ukraine, so Russia prioritizes secure access to these Ukrainian pipelines. This heavy dependence on transit routes via Ukraine emerged as a critical vulnerability for Moscow, as clearly revealed during a series of Ukrainian-Russian energy crises (the disputes of 2006, 2009 and 2013–2015), which also had adverse implications for European energy security. Consequently, Russian strategic moves supporting the separatists, eventually leading to the annexation of Crimea by the Russian Federation, demonstrates a critical—though often overlooked—energy dimension.

The Crimean Peninsula’s offshore oil and gas resources in the Black Sea are estimated between 4 and 13 trillion cubic meters of natural gas. Hence, when Russia seized Crimea, in addition to territorial gains, Russia gained control over a maritime zone with potentially rich offshore energy resources more than three times Crimea’s land mass [104]. After the annexation, one of the first moves of the new Crimean government was to entrust management of the peninsula’s energy resources to Gazprom [105]. This Russian initiative was a major blow to Ukraine’s hopes for and attempts at eventual energy independence. On the other hand, Russian engagement in the conflict and the Crimean annexation also presented challenges for Gazprom and Russia as international sanctions were imposed with adverse effects on the Russian economy [106].

In addition to rich Crimean energy reserves, control over potential transit routes presented an additional incentive for the Kremlin. Previously, Russia had to carry out a cumbersome negotiation process with third parties for access to the Exclusive Economic Zones (EEZ) under the Black Sea for its nascent pipeline projects, such as the South Stream which is currently shelved and projected to be replaced by Turkish Stream [107].

Initially, when Russia announced the South Stream project in 2007, Gazprom aimed to transport Russian natural gas to European consumers through Bulgaria and Serbia to Hungary and Austria. The shortest initial route was projected to go through the continental shelves of Russia, Ukraine, Romania, and Bulgaria. Due to their gas disputes with Ukraine, however, Russian authorities started to consider a longer route, transporting natural gas under Turkey’s EEZ in the Black Sea. Since this alternative required the consent of the coastal state, according to the UN Convention on the Law of the Sea, it led to a lengthy negotiation process between Russia and Turkey [108]. After the annexation of Crimea, Russia no longer needs the Turkish EEZ and has acquired that long-desired access to and control over critical zones of the Black Sea vital for alternative pipeline routes.

Ultimately, Russia’s support for the separatists and its annexation of

Crimea served a dual purpose for Russian energy interests: (1) giving Russia control over Crimean offshore energy resources, while denying Ukraine access, and (2) enabling future transit route diversification for Russia, bypassing Ukraine and avoiding dependence on access to Turkey's EEZ. Hence, energy emerged as one of the critical drivers of the Russian strategy of supporting, shaping, and ultimately benefiting from separatism and conflict in Crimea.

Additionally, in Eastern Ukraine's ongoing conflict, fueled by Russian support of the rebels, the presence of vast deposits of natural gas in shale formations (i.e. the shale gas reserves) in the separatist-held Ukrainian regions of Donetsk and Lugansk plays a significant role, particularly since one of the main winners in the conflict may well be Russia's Gazprom. Ukraine is one of the few European countries that has not banned fracking and hosts the third-largest shale gas reserves in Europe, estimated at 1.2 trillion cubic meters [109]. When maps of the conflict and the locations of Ukraine's shale gas fields are examined, one can clearly see striking overlaps.

According to the Ukrainian government, the Yuzivska shale gas field contains approximately 3 to 3.5 trillion cubic meters of shale gas (CMU). In an optimistic scenario, before the outbreak of armed conflict, Yuzivska was expected to produce 0.02 trillion cubic meters annually by 2030, effectively doubling Ukrainian gas production from 2011 [109]. In January 2013, Ukraine signed its first shale gas production sharing agreement (PSA) with Royal Dutch Shell at the World Economic Forum in Davos, Switzerland. Accordingly, Shell's 50-year PSA permit at Yuzivska, in the eastern Dnieper-Donets Basin, would extend over an area of 7,886 km². The agreement allowed for 70 percent investor recovery and a 16.5 percent government revenue share [110]. This PSA paved the way for a potential \$10 billion investment in the Yuzivska field [111].

These developments significantly increased the prospects for Ukrainian energy independence from Moscow, and even promised opportunities for Ukraine to export gas to European consumers, competing with Gazprom. Mykola Azarov, Prime Minister of Ukraine, stated that even if Gazprom did not like these developments, it was Gazprom's own fault. Moreover, he added, "If they have not 'choked' us with these prices for three years, maybe we would not start to extract shale gas. It is possible. We have a number of other problems, but once they pushed us to this, we are not going back" [111]. However, the conflict between Ukrainian government forces and pro-Russian separatists has overshadowed any potential infrastructure development or investment in the region. The towns of Slovyansk and Kramatorsk, where heavy fighting took place, are located right above the Yuzivska field. Initially, Shell declared *force majeure* and postponed the project. On account of the further deteriorating security situation, the energy giant ultimately decided to pull out of shale gas development projects in the region, citing the lack of security for their investments and worsening extraction prospects as the major reasons [112]. The withdrawal of the most significant international investor in Eastern Ukraine enhanced Gazprom's position, as well as diminishing the prospects for Ukrainian energy independence. Once again, Russian support for rebel groups in Ukraine improved Moscow's position and provided prospective future gains in the energy realm.

This case study clearly illustrates the major findings from the earlier large-N analysis. Natural gas resources and the wealth of intervening states are found to increase the likelihood that they support the rebel side among conflicting parties in a given state of interest.

6. Conclusion

As energy security gains importance, the role of energy resources in relation to conflict presents new puzzles. Our findings on the interaction between energy resources, civil war, and outside state intervention reveal the diverse effects of dependence on exported and imported natural gas on potential interveners' decision to support rebels. Since aiding rebels who fight rival states is a calculated act by supporter

states, those states consider the possibility that their access to energy supplies could be disrupted. When analyzing the role of energy resources with a specific focus on natural gas, export dependence increases the likelihood of support for rebels if it facilitates more control over supply routes, while dependence on imported resources has a negative impact on the likelihood of support. Resource-abundant states have different priorities when they devise foreign policy. This is illustrated by Russia's policy toward Ukraine in which Russia sought to consolidate its control over supply routes and to eliminate potential Ukrainian energy competition, further reinforcing European dependence on Russian natural gas. When it comes to import-dependent states, we find that such states are more cautious in supporting rebels even in resource-poor states.

We argue that natural gas-rich states are more likely to support rebel groups fighting other states if the rebels' target states are also gas-rich. We highlight both the competition logic and the desire to secure supply routes as causal mechanisms in our first two hypotheses. In the case of Russia and Ukraine, Russia prioritized maintaining its hold over the supply of natural gas to Europe. Moreover, Ukraine has a significant amount of potential reserves of offshore oil and gas in the Crimean Peninsula and rich shale gas reserves in the vicinity of conflict zones in Eastern Ukraine. In this context, supporting pro-Russian rebels in the Eastern Ukraine provides a long-term leverage for Russia in its relations with Ukraine.

By contrast, import-dependent states are more reluctant to provide support to rebels. Since secure access to energy resources is essential in the modern age, states that rely on imported energy resources will avoid engagements that could jeopardize such access. Further analysis with a nuanced dyadic measure of energy interdependence would provide significant insights about the role of import-dependence on states' foreign policy in general. This advances the view that secure access to these resources is critical and such concerns might contribute to inter-state cooperation rather than conflict. The initial theoretical prediction about the behavior of resource-poor states prioritizing economic stakes over political ones is supported by our empirical analysis.

We stress that economic and political implications cannot be easily divorced from one another. Hence, this study paves the way for further examination and analysis of the role of economic incentives in states' decisions about intervening in internal conflicts of other states, since resource wealth and resource-scarcity influence states' foreign policy choices differently. Moreover, while securitization of energy policy could fuel conflicts, energy dynamics and interdependence could also foster cooperation. States are often physically and economically connected to each other through energy infrastructure and trade networks. These international energy ties produce increasing interconnectedness, not only for energy trade, but also for foreign policy strategy and motives for intervention, as well as the potential for international collaboration. Hence, exploring the causal mechanisms where energy resources could trigger and/or have a multiplier effect towards inter-state conflict or cooperation is crucial and has significant policy implications.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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