

# Would ratification of the European Union-Ukraine Association Agreement in 2014 have deterred Russian military intervention in Eastern Ukraine?

A game-theoretic evaluation of conflict from the realist perspective

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## Abstract:

This research project examines the proposition that successful ratification the European Union-Ukraine Association Agreement in 2014 would have deterred Russian military interventions into Eastern Ukraine in that year. Using classical realism and neorealism as a theoretical guide, this topic is addressed by means of a three-player game describing a counterfactual scenario. By examining historical evidence to identify preferences for each player, we critically examine the available strategies and reach the conclusion that Russian military intervention was inevitable under the existing circumstances, regardless of whether the Association Agreement was successfully ratified at the beginning of 2014.

Word Count: 2163

## Introduction:

Why this question is important and the theoretical, historical and economic tools available to answer it

Chifu, Nantoi & Sushko (2009) argue that Ukraine is perceived by Russia to be part of its “sphere of ‘privileged interests’”, in which it pursues a “modernized” manifestation of the Brezhnev Doctrine. Various writings of Hans J. Morgenthau are useful for interpreting the reasoning behind this policy. In *Political Power (1960a)* Morgenthau argues that, irrespective of their goals, states “struggle for power”, derived from pessimism about human nature – this is ‘classical realism’. Alternatively, Mearsheimer (2001) – a ‘neorealist’ – purports that the structure of the international system is anarchic, which forces states to pursue power as a matter of survival. As Steil (2018) points out, it can be argued that Russia does indeed feel existentially threatened by the encroachment of the EU into its sphere of influence. Notably, both branches of realism hold that states are rational actors. For the purposes of this paper we will treat the EU as a state and suppose that all states are rational and power-maximising.

The Euromaidan movement in 2013-14 led to the ousting of Ukraine’s pro-Russian president, Viktor Yanukovich, triggered by his decision to walk away from a planned EU-Ukrainian Association Agreement (EUAA). This was after Russian warnings that accepting the agreement would potentially lead to “the collapse of the state” (Walker, 2013). The resulting fallout led to Russia annexing Crimea in February 2014 and supporting separatist forces in the Donbass from April-August 2014. With the UN estimating over 3000 civilian deaths in the ongoing conflict, the need to be able to predict the behaviour of international actors to minimise the impact on innocent parties is evident. Therefore, we shall consider the counterfactual: how would events have played out had the EUAA been accepted by Yanukovich?

The decision to use this event as the key turning point which led Russia to intervene militarily is not arbitrary but is supported both empirically and theoretically. According to Walker (2013), Russian presidential advisor Sergey Glazyev stated that signing this agreement meant that Russia “could no longer guarantee Ukraine’s status as a state” and “could possibly intervene” in the country under the right circumstances. From a theoretical perspective, Ukraine entering Europe’s orbit at the expense of Russia arguably changed the Euro-Russo balance of power (conceptually outlined by Morgenthau, 1960b), hence provoking a Russian response in an attempt to prevent this unbalancing.

Game theory provides a structured method for analysing choice, yet to the best of our ability we have not yet identified a paper which takes a game-theoretic approach to the Ukrainian conflict. We hypothesise that military intervention will continue to be the perceived dominant strategy for Russia, regardless of whether the EUAA is in place – from our research, we believe that historical data is supportive of this view.

## Constructing the Game:

A brief outline of the players and available strategies

The game will be two turns long and described throughout using the following notation:

(a)

**Player**  $i \in \{1 = \text{EU}, 2 = \text{Ukraine}, 3 = \text{Russia}\}$

Each player has a set of actions or **pure strategies**,  $S_i$ , wherein a single strategy from within this set is described as:  $s_i \in S_i$

Lastly, we will define an **action profile** as a list of strategies played by each player in a particular iteration of the game:  $s = (s_1, s_2, s_3) \in S$ , where  $S = (S_1, S_2, S_3)$

Turn 2 strategies will use the same notation, but as:  $d_i \in D_i$

Turn 1 introduces the option of EUAA ratification, which both parties must accept to come into force. Therefore:

$$S_1 = S_2 = (\text{Accept}, \text{Reject})$$

To identify Russia's strategy set, we will make the simplifying assumption that any retaliation will be militaristic in nature (based on our introductory argument). Thus:

$$S_3 = (\text{No Action}, \text{Directly Military Intervention}, \text{Indirect Military Support})$$

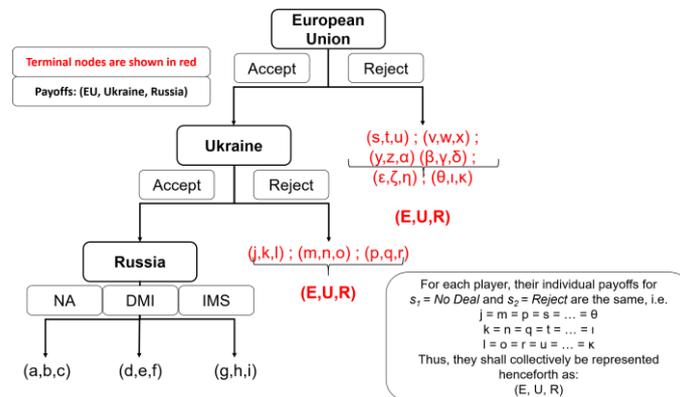
Or:

$$S_3 = (\text{NA}, \text{DMI}, \text{IMS})$$

The intuition here is that Russia will only move after both the EU and Ukraine have enacted their decisions. We assume there is *perfect information* for all prior turns played. Certain strategies may be credible or non-credible, depending on the specific characteristics of the players.

Representing Turn 1 in its extensive form (Figure 1), the strategies  $s_1 = s_2 = \text{Reject}$  are terminal nodes, as they simply lead to the observed reality. Our counterfactual must take place under the circumstance  $s_1 = s_2 = \text{Accept}$ .

**Figure 1: Extensive form game for Turn 1**



Turn 2 introduces follow-up reactions for the EU and Ukraine to the strategy  $s_3 \in S_3$ , and outlines some further Russian response. This allows for the possibility of introducing actions which may have been insufficient to deter military action alone, but in combination with EUAA ratification may now be effective. Both the EU and Ukraine will react *simultaneously* to  $s_3 \in S_3$ .

At a glance, the EU must decide between the following strategies:

$D_1 = (\text{No Action}, \text{Direct Military Intervention}, \text{Indirect Military Support}, \text{Economic and Diplomatic Sanctions})$

We will later expand upon why many of these are non-credible, resulting in a credible strategy set of:

$D_1 = (\text{No Action}, \text{Economic and Diplomatic Sanctions})$

Or, in short-hand,

$D_1 = (\text{NA}, \text{EDS})$

Considering Ukraine now, its specific characteristics inherently limit its available strategies. Its lack of economic clout in comparison to the other players (IMF, 2015) and the disregard displayed by Russia regarding its sovereignty (Walker, 2013) essentially takes an economic or diplomatic response off the table, whilst – given that Ukraine itself is the ‘war theatre’ – the strategy IMS is similarly unlikely. Therefore, Ukraine’s strategy set is rather straightforward:

$D_2 = (\text{NA}, \text{DMI})$

Available strategies for Russia will differ, depending on its Turn 1 decision. Russia also *moves after* the EU and Ukraine.

If  $s_3 = \text{Direct Military Intervention}$ , then invariably two of Russia’s strategies in Turn 2 must be either to withdraw or maintain its troops. We omit in-kind responses to, say, economic sanctions, to simplify the game. Alternatively, Russia could switch to its other Turn 1 strategy,  $s_3 = \text{IMS}$ , during its second turn. Therefore, its strategy set is:

$D_3 = (\text{Withdraw}, \text{Maintain}, \text{IMS})$

Corollary to the above, the strategy set when  $s_3 = \text{Indirect Military Support}$  is:

$D_3 = (\text{Withdraw}, \text{Maintain}, \text{DMI})$

In the special case where  $s_3 = \text{No Action}$ , it would be nonsensical for the EU or Ukraine to select any strategy other than  $d_1 = d_2 = \text{No Action}$  (there is no Russian action to respond to). Likewise, assuming there has been no periodic change in Russia’s military capabilities, its only logical response is  $d_3 = \text{No Action}$ . Thus:

$D_3 = (\text{No Action})$

We leave the extensive form diagrams to the appendix (Section 2.1, Figures 2a-2c).

### Historical data and likely dominant strategies

Russia has historically demonstrated a tendency towards war over negotiation. de Mesquita & Lalman (1994), through their table of ‘World War Dyads’ (Appendix Section 3.1.1), show that in all but one case Russia has opted for confrontation or war in dealings with international opponents (in the periods 1914 and 1939-40). This is despite the opponent in 5 of 8 ‘sphere of influence’ cases opting for a negotiated settlement over war.

Simão (2016) has characterised one dynamic of Russia's post-Soviet foreign policy by "Russia's perceived relative power within [the international] system", which supports the realist basis for our model. Recent history supports this view, with the 2008 Russo-Georgian War sending a "clear message" that Russia is "prepared to use military force to promote foreign policy objectives" (Harari & Smith, 2014), often to gain "indirect leverage" over Western regional interests. This is further evidence for a strong and persistent Russian preference for conflict as a matter of policy: it is not a "novelty" or "radical shift" (Simão, 2016). Mix (2013) posits that this aggressiveness also derives from a perceived "humiliation" at the hands of the West and could thus be seen as "revenge". If this is the case, then this can only serve to reinforce Russia's war-prone preferences.

The reason for ruling out DMI as a credible EU threat reflects its inability to follow through. Despite the EU advancing its Common Security and Defence Policy (CSDP), with a broader remit to now include a rapid reaction force, CSDP operations "most often" are limited to activities such as police and judicial training, or security sector reform (Mix, 2013). As of yet, plans for "EU Battlegroups" remain only plans, with a number of member states resisting the idea of closer military integration (Peck, 2016). As such, the EU as an entity is not capable of launching a direct military intervention of its own, and thus would need to rely on its constituent states to act. With Germany and America both ruling out a potentially escalatory intervention (Smeets, 2018), it appears that there is little appetite nor ability for a European (or NATO) military response.

Even if the EU were to provide indirect military support in the form of supplying weapons or funding, it is questionable as to what difference this would make. According to Smeets (2018), military action has been "mainly conducted" by Ukraine against a Russian force powerful enough to "plausibly challenge the United States and its allies" in this regional context (Majumdar (2018) quoting Lisa Sawyer Samp). Given that Russia's military budget is approximately 18.4 times larger than Ukraine's (Tian et al, 2018), vast external funding would be needed to make up for this deficiency – spending levels which are deprived of political will amongst EU countries (Sasse et al, 2018). This is not even taking account of existing capability differences between Russian and Ukrainian forces.

On the contrary, we posit that the EU is more likely to play to its strength as an "economic power" (Mix, 2013) and select  $d_3 = EDS$  as its best response. Herman van Rompuy, when he was President of the European Council in 2014, re-affirmed his belief in sanctions being "a means to an end [...] to achieve [...] a negotiated solution" (Smeets, 2018), so this at least demonstrates political will for their enactment. Logic also dictates that sanctions be preferred to taking no action at all: in real life, in the absence of the EUAA, the EU implemented a raft of diplomatic and economic sanctions (Europa, 2019); *ceteris paribus*, failure to do so under our counterfactual would be a violation of the Sure Thing Principle. Furthermore, an argument can also be made that, as the relative value of Ukrainian stability to the EU has increased with the signing of the deal, the EU is more likely to proactively defend it. As we have established that military measures seem implausible, this leaves EDS as its only credible alternative.

Despite this, Smeets (2018) argues that existing literature does not "present conclusive evidence that economic sanctions are an effective policy instrument". In fact, he goes on to state that one possible outcome of applying sanctions is to simply encourage the opponent to "develop trade relations with third parties". There is evidence for this in the case of Russia. Since 2014, the Eurasian Economic Union (of which Russia is a major part) has signed free trade agreements with Egypt, China and Iran, amongst others; this has boosted trade and/or

reduced import duties between the parties (Dezan Shira & Associates, 2018a, 2018b; Financial Tribune, 2018), and could help to mitigate the effect of EU sanctions. Therefore, it is unreasonable to conclude that EU sanctions provide a sufficient deterrent to Russia maintaining its troops in Ukraine.

### Conclusion: Solving the game and implications for the future

We have notably left discussion of Ukraine's chosen strategy out of our analysis, but it is only now that we see that Ukraine's action is of little consequence to the result. If Ukraine chooses  $d_2 = DMI$ , then we find that the responses of our players in this counterfactual mirror reality: thus, the conclusion is that Russia will choose to maintain its troops. If  $d_2 = NA$  is played instead, then the only deterrent to Russia choosing  $d_3 = Maintain$  is European sanctions, which the evidence shows to be ineffective. Ukraine taking no action at all simply increases the payoffs of Russia's chosen strategy.

As we have argued that military intervention is the best and most likely way for Russia to achieve its foreign policy objectives and given that the other players cannot sufficiently disincentivise this, Russia therefore cannot gain by withdrawing its troops or otherwise. The solution to the game must be as follows:

$s = (Accept, Accept, DMI)$ ;  $d = (EDS, NA \text{ or } DMI, Maintain)$

We cannot truly test our hypothesis as history cannot directly repeat itself, and nor would we wish it to in this instance. Many innocent people have been killed during this conflict and many others like it, so it is vital that we gain a better understanding of the motivations, preferences and – most importantly – the likely actions that the key global players will take in response to new trading relationships, civil wars and other strategic unbalances, in order to work out how we can best respond and minimise the adverse humanitarian impact.

**Appendix:**

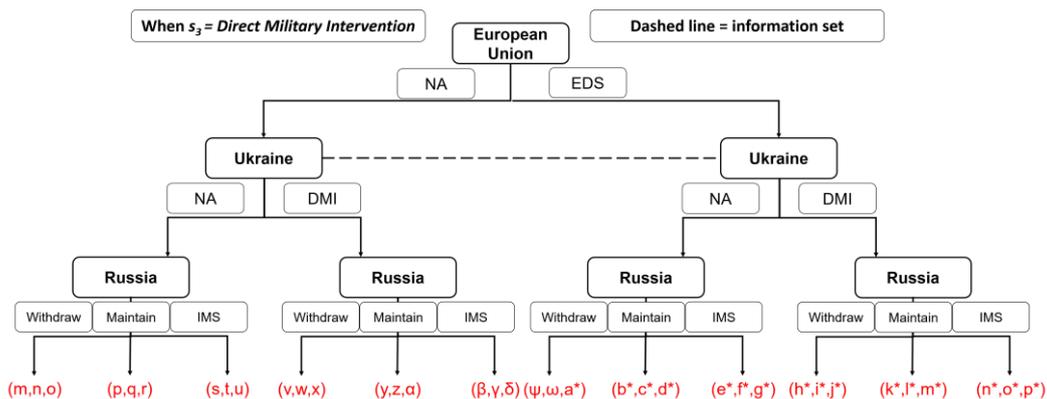
**2.1**

The game trees below provide diagrammatic illustrations for Turn 2:

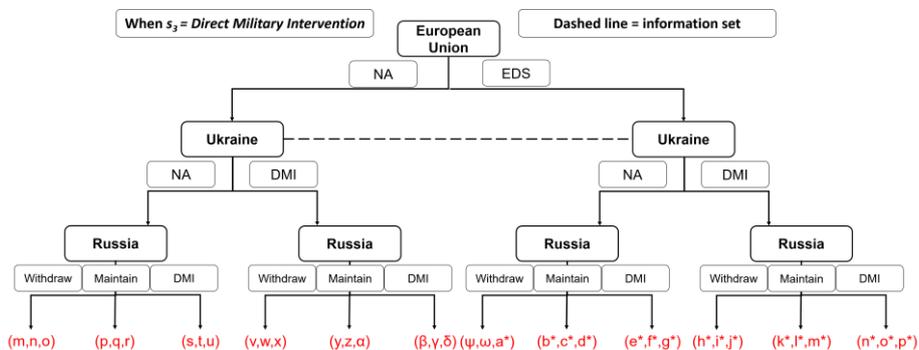
**Figure 2a: Extensive form game for Turn 2 given  $s_3 = \text{No Action}$**



**Figure 2b: Extensive form game for Turn 2 given  $s_3 = \text{DMI}$**



**Figure 2c: Extensive form game for Turn 2 given  $s_3 = \text{IMS}$**



**3.1.1**

The following image is taken from Bruce Bueno de Mesquita & David Lalman's 1994 book *War and Reason* (circled areas show instances where Russia has opted for war):

World War Dyads								
1914			1939			1940		
Nation A	Nation B	Level	Nation A	Nation B	Level	Nation A	Nation B	Level
Austria-Hungary	Russia	5 5	Italy	France	2 4	Russia	Romania	4 1
Germany	Russia	5 5	Italy	Britain	2 4	Germany	Romania	4 1
Turkey	Russia	5 5	Russia	Estonia	4 1	Hungary	Romania	3 1
Austria-Hungary	Yugoslavia	5 5	Poland	Germany	5 5	Russia	Lithuania	4 1
Germany	Yugoslavia	5 5	France	Germany	5 5	Britain	Italy	5 5
Turkey	Yugoslavia	5 5	Britain	Germany	5 5	France	Italy	5 5
Austria-Hungary	Britain	5 5	Romania	Hungary	3 1	Switzerland	Germany	3 1
Germany	Britain	5 5	Romania	Germany	3 1	Greece	Italy	5 5
Turkey	Britain	5 5	Germany	Lithuania	3 1	Greece	Germany	5 5
Austria-Hungary	France	5 5	Italy	Yugoslavia	2 1	Russia	Latvia	4 4
Germany	France	5 5	Hungary	Yugoslavia	3 1	Russia	Estonia	4 1
Turkey	France	5 5	Italy	Albania	4 4	Italy	Yugoslavia	4 5
Austria-Hungary	Belgium	5 5	Italy	Germany	3 1	Germany	Yugoslavia	5 5
Germany	Belgium	5 5	Germany	Belgium	5 5	Hungary	Yugoslavia	4 5
Turkey	Belgium	5 5	Germany	Netherlands	5 5	Bulgaria	Yugoslavia	4 5
Germany	Norway	3 3	Switzerland	Germany	3 1	Italy	Britain	4 2
Britain	Netherlands	4 1	Germany	Denmark	5 5	Germany	Britain	5 2
Sweden	Germany	3 1	Germany	Norway	5 5	Hungary	Britain	4 2
Sweden	Russia	3 1	Germany	Sweden	5 1	Bulgaria	Britain	4 2
Sweden	France	3 1	Estonia	Poland	4 4			
Sweden	Britain	3 1	Russia	Latvia	4 1			
Germany	Denmark	4 3	Russia	Poland	4 4			
Portugal	Germany	4 4	Russia	Finland	5 5			

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