Oligarchs and Legislative Politics in Post-Soviet Ukraine

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Abstract

Scholars of post-communist Ukraine are well aware of the importance of oligarchs in the political system. Ukrainian oligarchs are critical actors who support candidates, political parties, rent seek, influence the executives among other things. They also serve in elective office. Between 2000 and 2016, 29 oligarchs were elected to the Ukrainian parliament, the Supreme Rada. In this article, we test whether these legislators were, in fact, influential members of parliament. Using a measure of legislative centrality (Ringe and Wilson 2016), we show that oligarchs were among the most influential members of the Rada during this period.

Introduction

On March 26, 2006, Ukrainian voters went to the polls to elect the 5th Convocation of the *Verkhovna Rada*, the Ukrainian parliament. The Party of Regions was the clear winner, receiving 32.1 percent of the vote, nearly 10 points higher than its main opponent, the Tymoshenko Block (22. 3 percent of the vote). Party of Regions leader Viktor Yanukovych, who "won" the 2004 presidential election only to be removed in a new election spurred by the Orange Revolution, would be the leader of the largest party and new Prime Minister.

Rinat Akhmetov was the seventh ranked candidate on Yanukovych's Party of Regions list. Hailing from Donetsk in eastern Ukraine, Akhmetov was the owner of Systems Capital Management Group, which had significant investments in Ukrainian mining and steel industries among others. Akhmetov was, at the time, listed as Ukraine's richest man with assets estimated around $11.8 billion.

Akhmetov was, and remains, one of Ukraine's most powerful "oligarchs.'' Pleines (2016, p. 106) defines oligarchs as ``entrepreneurs who use their wealth to exert political influence.'' Oligarchs are prime movers in Ukrainian politics. Their control of vast economic resources, often including media outlets, gives them a privileged position to influence Ukrainian politics. Oligarchs have sponsored political parties and supported candidates for office. Their political importance is well understood by Ukrainians and their positions on critical political issues matters.

The ability of powerful business interest to influence politics is common in many countries. What makes Ukrainian oligarchs interesting is that between 2000 and 2016, 29 served directly in the *Verkhovna Rada* (Pleines 2016). Rinat Akhmetov, for example, served as a

member of the Party of Regions in both the 5th and 6th Convocations of the Rada (2006-2012).

The presence of a significant number of Ukraine's most powerful businesspeople begs the

question—do they influence legislative outcomes? Their important position in the Ukrainian

political economy should give them the ability to affect outcomes in the Rada. Their notoriety

and links to corruption may also engender significant opposition to them and their stances.

Based on this logic, we argue that oligarchs are highly influential members of the Rada in

comparison to other deputies. To test this argument, we created a dataset of all Rada deputies

from 2000-2016, which covers the 3rd through the 8th Convocations. For each deputy, we

calculate a measure of legislative influence, "weighted centrality" that measures the correlation

between legislator voting records (Ringe and Wilson 2016). Using a Bayesian hierarchical

gamma regression model, we find strong evidence that oligarchs, when controlling for other

factors, are more influential than other deputies. In fact, oligarchs are nearly as influential as are

party leaders. We also find that the influence of oligarchs is conditioned on other factors

including incumbency, electoral factors, and their closeness to the floor ideological median.

This article proceeds as follows. First, we discuss the rise of oligarchs and the sources of

their influence in Ukraine. Second, we analyze their place in the Rada between 2000-2016.

Third, we explain how we test for the legislative influence of oligarch deputies through an

analysis of their centrality. Fourth, we present a statistical analysis of all deputies in the Rada

between 2000 and 2016. The results show that being an oligarch is highly correlated with

centrality, as we expected. Finally, our conclusion discusses the significance of these results and

suggests a course forward.

The Economics and Politics of Oligarchs in Ukraine

The collapse of the Soviet Union led to the independence of Ukraine in 1991. Out of this collapse, Ukraine began the process of democratizing. For the first time, Ukraine featured meaningful elections, newly formed civil society organizations, as well as the creation of new political parties. These changes represented a major break from the communist past and led to the hope that Ukraine would further deepen democracy.

In Ukraine, the end of communism ushered in freer elections and political parties, though many argue post-communist Ukraine falls short in many areas of democracy (Levitsky and Way 2002). One of the critical features of modern Ukrainian politics are the ``oligarchs.'' Pleines (2016, p106) defines oligarchs as ``entrepreneurs who use their wealth to exert political influence.'' Thus, oligarchs represent important, wealthy business figures who use their positions within the economy to influence politics both directly and indirectly (Puglisi 2002). Their participation is often cited as source of significant corruption within Ukraine (Aslund 2014, Khmelko and Bonnal 2020). Given that Ukrainian voters often cite corruption as a, if not the, major problem in the country, oligarchs are also highly controversial figures because of their wealth and position.

The rise of the oligarch class is tied to the destruction of communism and the centrally planned state economy. Hellman (1998) links the rise of powerful business interests to the ability of partial winners of economic reform to stall further market reforms in post-Soviet economies. The limited reform attempts of the early post-Soviet period allowed actors to manipulate the reform process to obtain significant control over elements of the economy (Emerson et al. 2018, Puglisi 2002). Informal networks among Soviet-era directors often formed the bases of many of the early oligarchic clans (Lankina and Libman 2019).

At their core, the business and political interests that form around oligarchs are personalist in nature. Hale (2014) argues that politics in Ukraine, like politics in other post-Soviet countries, is ``patronal.'' Hale (2014, p. 9) defines ``patronal politics" as a system where:

> . . . individual organize their political and economic pursuits primarily around personalized exchanges of concrete rewards and punishments through chains of actual acquaintance, and not primarily around abstract, impersonal principles such as ideological belief or categorizations like economic class.

The oligarchs of Ukraine do fit this description well. They are groups of actors cemented into multiple patron-client networks built around personal connections (Gould and Hetman 2008, Puglisi 2003). These oligarchic ``clans'' can contain economic assets in many different industries, such as metallurgy, mining, energy, finance, chemicals, and the media (Aslund 2014, Emerson et al. 2018). In many cases, they have ties to the state or state sector industries.

Over time in Ukraine, many of these oligarch clans developed along regional lines (Gould and Hetman 2008, Puglisi 2003, Van Zon 2007). Van Zon (2007) discusses in detail the formation of the ``Donetsk'' group. A myriad of state-owned and private firms within Donetsk coalesced to form a regional clan, headed by well-known oligarchs like Rinat Akhmetov. The Donetsk group exploited the privatization of state enterprises to control significant swathes of the coal, coke, and steel industries within the Donetsk region (Van Zon 2007).

Politically, oligarchs and their regional clans have played a significant role in Ukrainian politics through several paths. First, different oligarchs have been the main supporters of individual presidents of Ukraine. The Donetsk clan, for example, had strong ties to several presidents, including Leonid Kuchma and Viktor Yanukovich. Often, they used their relationship with presidents to benefit themselves. Kuchma, for example, sacked the reformist

Minster of Energy Yulia Tymoshenko who had threatened to reform the coal industry, which was opposed by the Donetsk clan (Van Zon 2007).

Second, oligarchs have backed individual political parties. For the period studied here, Ukraine's party system was weakly institutionalized (D'Anieri 2007, Diuk and Gongadze 2002, Kuzio 2003, Matsuzato 2005, Protsyk 2003, Whitmore 2004, Wilson and Bilous 1993, D'Anieri 2019, Fedorenko, Rybiy and Umland 2016, Kuzio 2014, Rybiy 2013, Sydorchuk 2016, Protsyk 2003, Whitmore 2004, Wilson and Bilous 1993). Thus, it is not a surprise that oligarchs and their networks can serve as substitutes for strong parties in post-Soviet states (Hale 2006). For example, the ties between the Party of Regions and the Donetsk group are well known. In the 1998 Rada election, the Green Party was taken over by oligarchs who controlled key list positions (Wilson 2005).

Finally, oligarchs have competed directly in Rada elections. To identify oligarchs in the Rada, we code those deputies who appear in the Pleines (2016) dataset.[1] Figure 1 plots the

Figure 1: Oligarchs by Convocation and Mandate
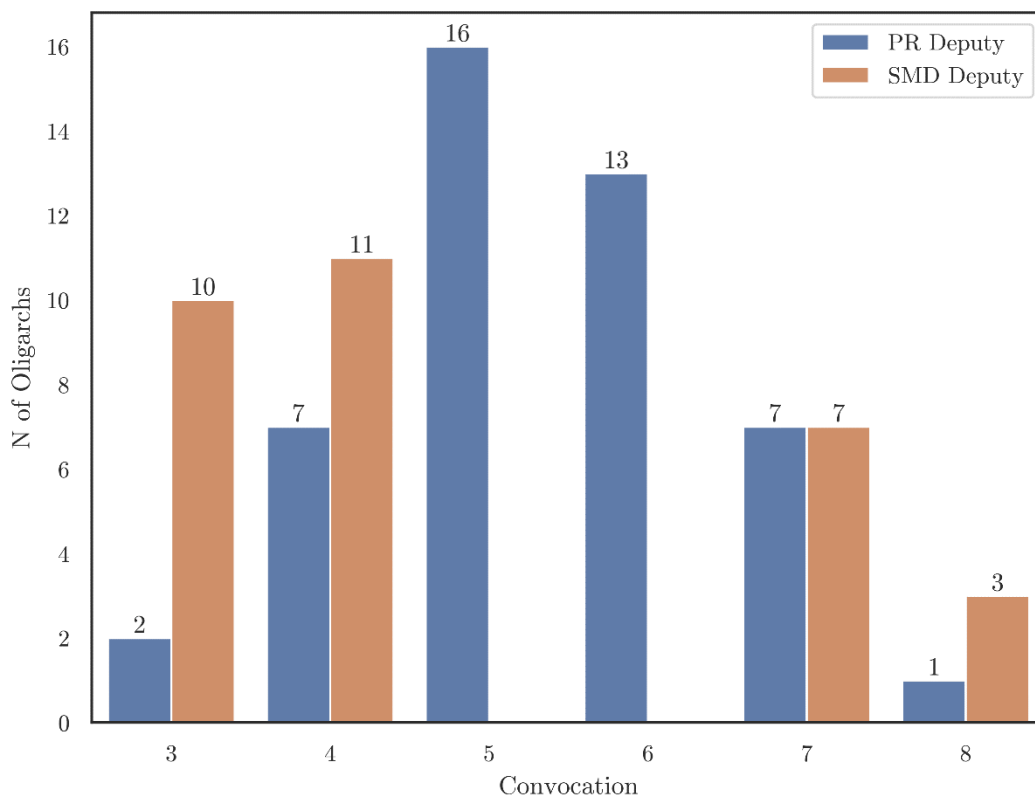
number of oligarchs per convocation by electoral mandate. Based on these 29 oligarchs, we have 78 instances of oligarch deputies over the period from 2000-2016.

Figure 1 reveals a couple of important insights into the presence of oligarchs in the Rada. First, the number of oligarchs directly elected to the Rada changes over time. The peak occurred during the 5th and 6th Convocations (2006-2012), representing a significant increase over the 3rd and 4th Convocations. The number of oligarchs, however, did decrease after this period. The 7th and 8th Convocations featured the fewest number of oligarchs across this span of time. The 8th Convocation featured only four elected oligarchs.

Second, oligarchs were elected in both PR and SMD elections. During this period, Ukraine two different electoral systems. The 3rd, 4th, 7th, and 8th convocations were elected using a mixed-member majoritarian electoral system; therefore, the Rada contained deputies elected in both SMD and PR elections. The 5th and 6th Convocations were elected using a pure PR system. One might suspect that the resource advantage in terms of financial, media, and state ties would give them advantages in SMD elections. This, perhaps, is true in some cases. The data, however, suggest that oligarchs can prosper in PR elections as well. Their resources that give them advantages in SMD elections should also get them strong positions on party lists.

So why would oligarchs want seats? Given their resources, it might make sense for them to indirectly influence outcomes through ties to deputies. First, positions in the Rada gave them the direct ability to impact legislation. Especially in the late 1990's, key policies of interests to oligarchs such as the tax code, privatization, property rights were being debated (Puglisi 2003). In addition, deputies were guaranteed immunity from criminal charges that could only be lifted by a majority in the Rada (Puglisi 2003). Thus, oligarchs engaged in shady business deals, membership in the Rada may have protected them. In fact, the decline in the number of

oligarchs in the 8th Convocation might be linked to the decision by the Rada to remove

parliamentary immunity in December 2019.

Oligarchs and the Ukrainian Rada

Do the oligarchs have influence in the Verkhova Rada? Few doubt that oligarchs, clans,

and the parties they support have an interest in influencing outcomes within the Ukrainian

parliament. Afterall, their influence over the party system and elections suggests that electoral

politics matter. There is little reason to believe that legislative politics are of no importance.

Yet, one of the obstacles to studying the role of oligarchs in Ukrainian politics in general, and

legislative politics, specifically, is that much of what they do is often hidden from view. The

type of backroom deals, patronage exchanges, and other types of activities found in systems like

Ukraine are nearly impossible to see. We simply may not know how often any Ukrainian

oligarch pays deputies for support on critical votes, for example.

Ukrainian oligarchs have, luckily for us, given us a way to study their legislative

activities—they have stood for and won elections to serve in the Rada. This gives us the

opportunity to analyze their legislative behavior to understand better their influence. For

example, if we examine patterns of oligarch parliamentary party membership, we gain some

insights into their ideological and policy preferences. Figure 2 plots the elected oligarchs by

parliamentary party ideological family. "Left" parties are those that support left, socialist party

positions like the Communist Party of Ukraine or the Socialist Party of Ukraine. "Right" parties

are those that embrace pro-reform agendas and represent Ukrainian nationalists such as Rukh or

Yushcenko's party. "Center" parties are less ideological, tending to represent business and

regional groups. The Party of Regions and Fatherland are good examples. The distribution

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Figure 2: Oligarchs by Parliamentary Party Family
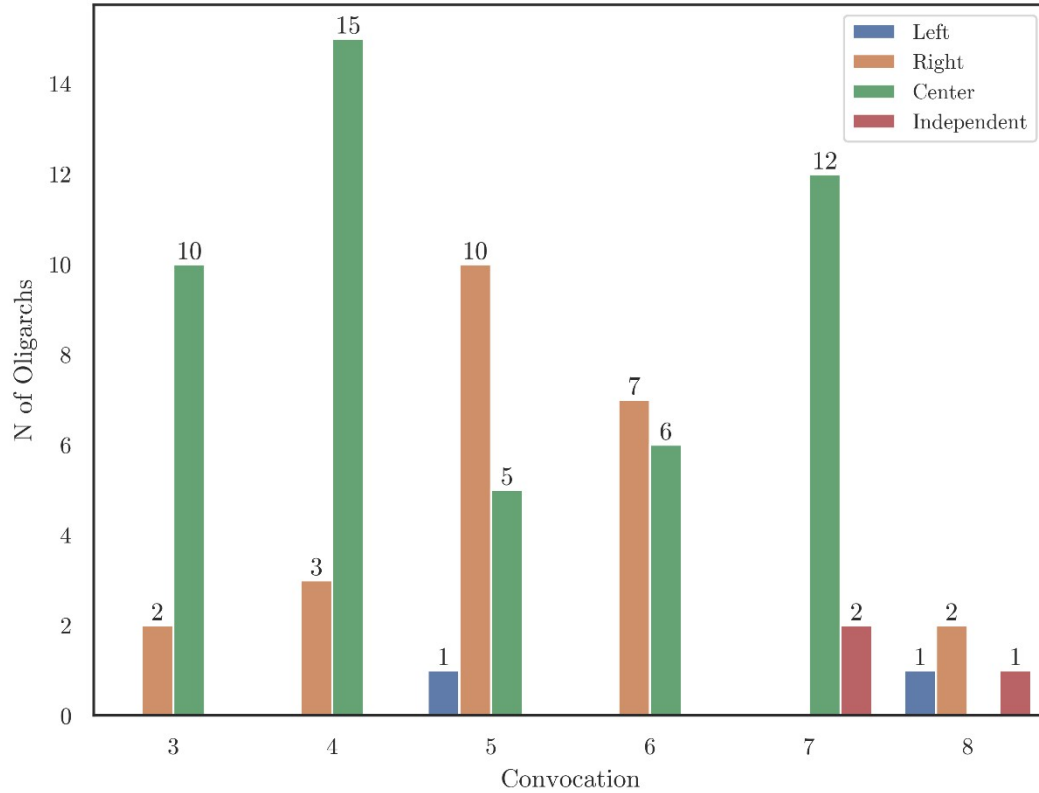
of oligarchs by party family clearly shows that they lean toward center parliamentary parties more than others. There were very few instances of oligarchs joining left parliamentary parties and were only found in the 7th and 8th Convocations. The greatest number of oligarchs in right parliamentary parties occurred following the Orange Revolution in the 5th Convocation, during the presidency of Viktor Yushchenko (2005-2010) who affiliated with right political parties.

Legislative Centrality

The presence of a significant number of wealthy, politically connected representatives in a country whose political systems is defined by rent-seeking and patron-client networks leads to

an obvious question—how do the oligarchic deputies affect the Rada? There are many ways to address this question. For this article, we want to examine whether they influence the voting records of other deputies. In other words, we want to measure their influence on roll-call voting. This is, of course, not the only means by which these deputies could influence the legislature; however, it is an important to analyze this influence for two reasons. First, it is observable. Unlike much of what happens in patronal systems, we can measure legislative influence. Second, evidence of overt legislative influence is a good indication of oligarchic influence. If the oligarchic deputies can influence the voting behavior of deputies, then it is an indication that they are a relevant political force in Rada politics.

To measure legislative influence, we rely on the legislative centrality measure developed by Ringe and Wilson (2016). The goal of measuring centrality is to measure each legislator's ``signaling influence'' (Ringe and Wilson 2016, p. 742). The logic is based on considering how legislators are part of a broader social networks. As members of a network, individual legislators will observe the behaviors of other members of the network and respond to them. In this case, the expectation is that the most influential members are those whose votes serve as either a positive or negative cue to other legislators. In other words, certain legislators have the influence to convince other legislators how to vote on specific issues. In some cases, their vote is a signal to legislators to vote in a similar fashion. Yet, it is also the case that influential legislators' votes are a signal to some legislators to vote in the opposite direction. The measure of centrality, therefore, is not a measure of agreement but a measure of signaling influence.

There is good reason to believe that the elected oligarchs are more influential than the average member of the Rada. First, their control over valuable resources makes them useful to other deputies. Supporting the voting position of an oligarch might give a deputy access to the

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resources controlled by the network. It might also signal support for the oligarch's clan that

spares the deputy from retribution by the oligarch and the clan. Second, given the politically

charged nature of oligarchs and the broader concerns over corruption—which is endemic to

Ukraine, the voting position of an oligarch might be a signal for deputies to oppose their

position. For some, oligarchs are the problem; therefore, some deputies might have a strong

incentive to oppose the legislative position of oligarch deputies in the Rada.

Ringe and Wilson (2006) introduce a weighted centrality measure that is bounded

between 0 to 1, which allows us to measure and compare the influence of legislators across

different legislative periods. The equation for weighted centrality is:

$$C_i = \frac{1}{n} \sum_{j=1}^{n} |\rho_{ij}|$$

where C_i is the weighted centrality for legislator i and ρ_{ij} is Pearson correlation coefficient

between the voting records of legislators i and j in a legislature with n seats (Ringe and Wilson

2016, p. 747).

Based on our understanding of Ukrainian politics, there is reason to expect that the

oligarchs elected to the Rada should be influential. Their control of critical resources and ties to

the state should give them the ability to influence other deputies. The significance of corruption

to voters and the role of oligarchs in that corruption may signal to some deputies that opposing

their positions may be the best strategy. Using this logic, we hypothesize that: *Oligarch

deputies will have greater weighted centrality scores than will other deputies*.

The remainder of this paper will test this hypothesis.

Centrality Analysis

To test our hypothesis, we create a dataset of all Rada deputies who served in the Rada between 2000 and 2016. As mentioned previously, this covers the 3rd through the 8th Convocations of the Rada. We only use data from the 3rd and 8th Convocations covered by the Pleines (2016) dataset. We use all electronically recorded roll-call votes during this period to calculate *Weighted Centrality*. The Rada, especially in early periods, had significant amounts of party switching. Consequently, we calculate weighted centrality for each deputy in each of their parliamentary parties. This means we have multiple records for some deputies to control for

Figure 3: Distribution of Weighted Centrality
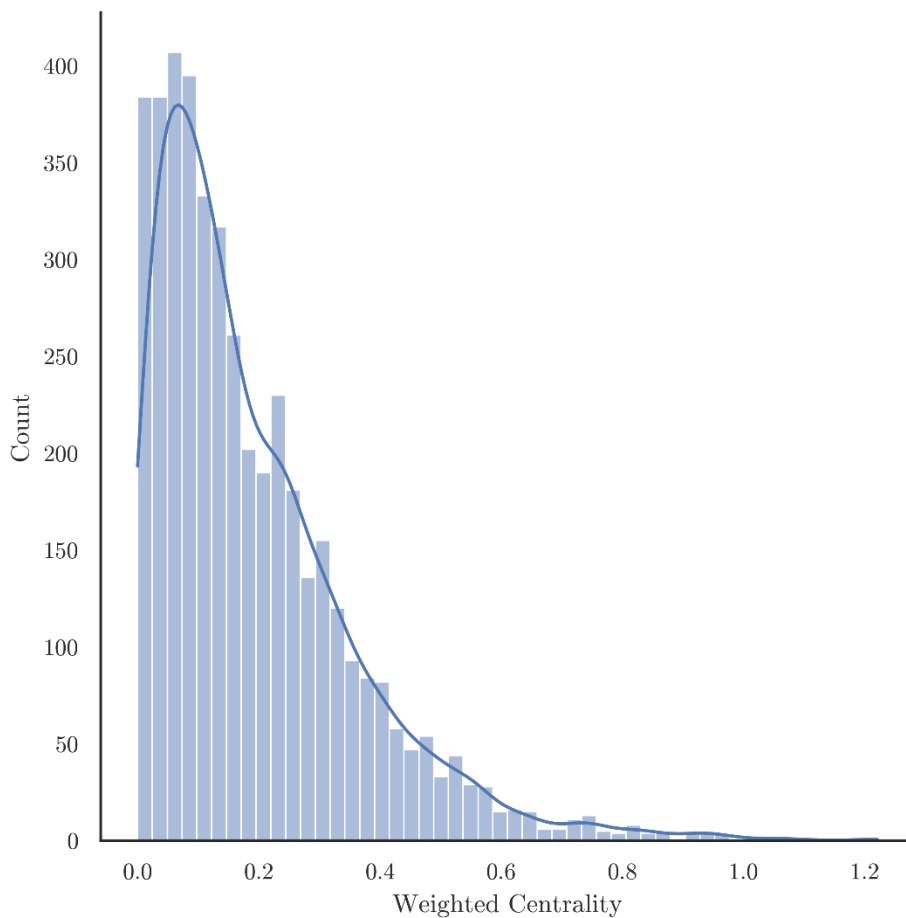
potential differences based on membership in different parties. As a result of this process, our

dataset contains 4,377 deputy/party observations.

To test our hypothesis, we utilize a Bayesian gamma hierarchical regression model

estimated using PyStan (2019). Our dependent variable is *Weighted Centrality*. We use a

gamma model, as opposed to a linear model, due to the distribution of the weighted centrality

variable, see figure 3. The variable is heavily skewed, making a gamma model a better

estimation strategy.[2]

Our main independent variable is *Oligarch*, which codes all oligarchs, based on the

Pleines (2016) dataset as "1" and the remaining deputies as "0". If our hypothesis is correct, then

this variable should be positively correlated with *Weighted Centrality*.

We include several control variables. We include a dummy variable, *Incumbent*, to

measure the effect of incumbents on centrality. Given their experience, incumbents may be more

influential than non-incumbents. It is possible that party leaders are more influential than other

deputies. Consequently, we include a dummy variable that measures it—*Party Leader*. The

Rada contains parliamentary parties that represent those parties that participated in the election.

Deputies, however, also could form parliamentary parties, so-called "deputy groups," that did not

compete in the election. It is possible that members of one type of parliamentary party will be

more influential; therefore, we include a dummy variable *Deputy Group* to control for this

possibility. Deputies with ties to the party of the executive may be more influential. Thus, we

include a dummy variable indicating whether a deputy was a member of a *Pro-Presidential*

parliamentary party. Existing research on the Rada finds that deputies who are members of the

parliamentary parties on whose label they competed in the election behave differently than those

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[2] We did estimate the equation hierarchical linear models using *Weighted Centrality* and the log of *Weighted Centrality*. The goodness-of-fit statistics show that the gamma model is the best choice.

that did not (Thames 2016). In addition, these differences vary by electoral mandate. Thus, we include dummy variables measuring partisanship, a member of their electoral party, and electoral mandate, PR versus SMD deputy. We use the *Non-Partisan PR* category as the reference group. Given the amount of party switching, we include the variable, *N of Parties*, that measures the number of previous parliamentary parties in which the deputy was a member. Finally, Ringe and Wilson (2016) find that legislators at the center of the ideological spectrum are more central than those on the extremes. We control for this by including the *Distance* variable. To calculate *Distance*, we first code each deputy with a preference measure estimated with all electronically recorded roll-call votes using the procedure outlined by Clinton, Jackman, and Rivers (2004).[3] We then take the absolute value of the difference between the floor median, and each deputy divided by the standard deviation for each convocation to create *Distance*.

We include random intercepts for each parliamentary party nested within each convocation. It is likely that deputies in different parties and convocations will have different error variances. By including random intercepts for them, we can control for this possibility.

Centrality Results

We test our hypothesis with model 1. Figure 4 plots the posterior median and 90% credible intervals of the first differences of the expected values for all variables in our model. The first differences for dummy variables are simply the difference in the expected value of changing the value of the variable from 0 to 1 while holding all other variables at their means and modes. For continuous variables, we calculated the difference of increasing the value of the

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[3] The Bayesian ideal points were estimated using Pystan (2019). Only those votes with less than 95% and more than 5% "for" votes were included.

Figure 4: Model 1 First Differences (DV=Wt. Centrality)
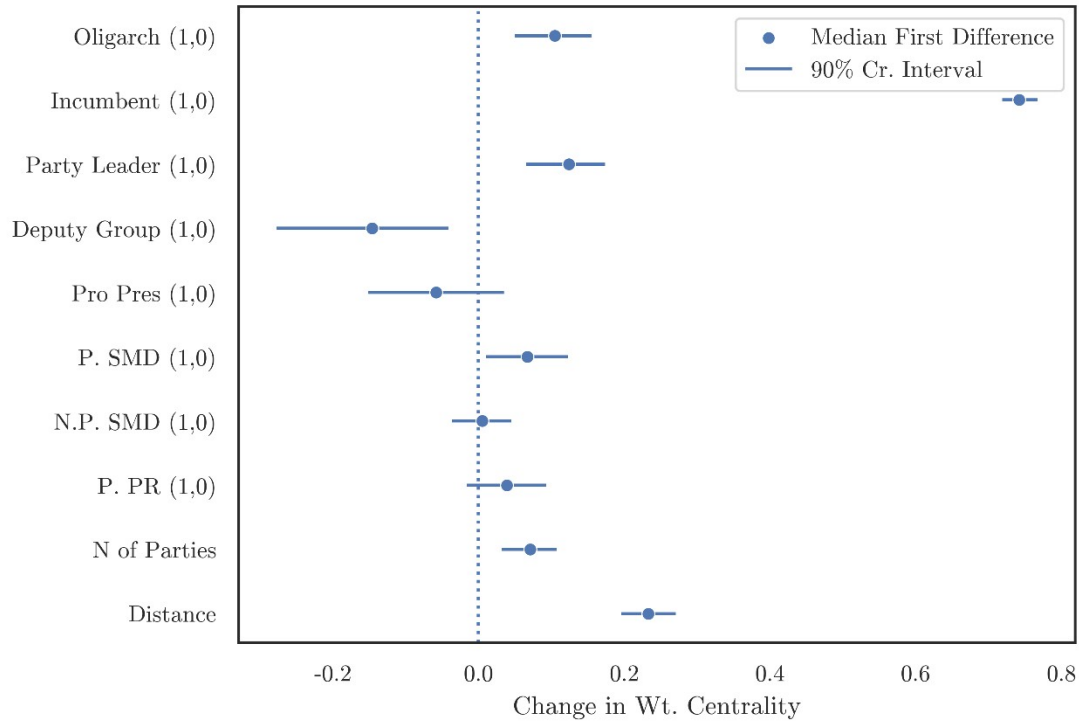
variable from one standard deviation below to one standard deviation above its mean while holding the value of all other variables at their means and modes. Detailed parameter estimates can be found in the appendix.

The results of model 1 support our hypothesis. Being an oligarch, increases centrality by 0.105 or about 10.5 percent of *Weighted Centrality* in comparison with other deputies. Thus, as hypothesized, deputies who are oligarchs have greater signaling influence than typical deputies. Based on our understanding of oligarchs in the Ukrainian polity, this makes sense.

The control variables provide interesting results as well. Incumbents are 76.7 percent more central than are non-incumbents. Most interestingly, however, is that party leaders are 12.4 percent more influential than are other deputies; therefore, party leaders are only slightly more influential than are oligarchs. Deputies who are members of deputy groups are 14.6 less

influential. Thus, type of parliamentary party matters in terms of influence. Ties to the executive branch through parties has no individual impact on deputy influence. In terms of partisanship and mandate, *Partisan SMD* deputies are 6.7 more influential than *Non-Partisan PR* deputies are. There are no statistically significant differences for other categories. It is interesting that there is a positive increase between the number of parties and weighted centrality —7.1 percent. This suggests that changing parties does not reduce influence. Finally, *Distance* is highly correlated with weighted centrality. Moving from one standard deviation below to one standard deviation above *Distance* increases weighted centrality by 23.3 percent. Thus, we have clear evidence that more extreme deputies are more influential than are centrist deputies.

Is the Oligarch Effect Conditional?

It is possible that the influence of oligarchs is conditional on other factors in our model. To test for this possibility, we interacted our *Oligarch* variable the *Incumbent, Deputy Group, Pro-Presidential*, partisan/mandate, *N of Parties*, and *Distance* variables in separate models.[4] We estimated the equations using the same methods detailed above with the inclusion of interaction terms. Figure 5 plots the posterior median and 90% credible interval of the first differences of the change in *Weighted Centrality* created by changing the value of the interaction variables from 0 to 1 while holding the value of the *Oligarch* variable at 1. Thus, we are presenting the effect of change from being a non-incumbent to an incumbent for an oligarch, for example. All other variables are held at their means or modes.

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[4] The detailed parameter estimates for these models can be found in the appendix.

Figure 5: First Differences Interaction Models 2-6
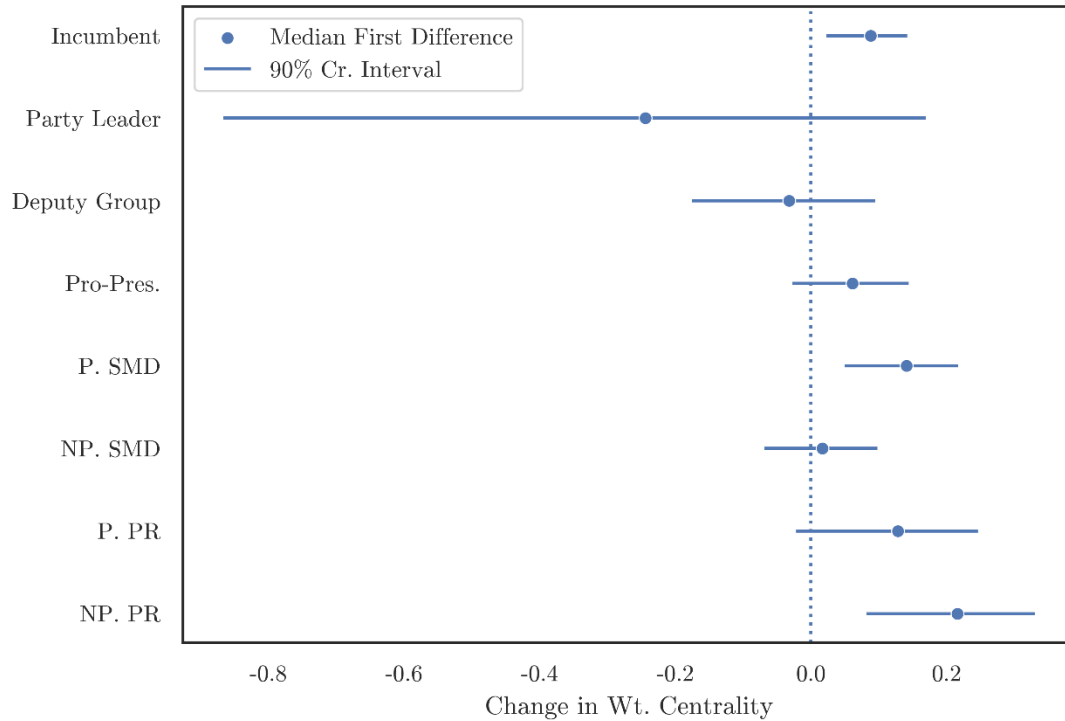
Figure 5 provide some evidence that the centrality of oligarchs in the Rada was conditioned by other factors. Incumbent oligarchs are 8.8 percent more central than are non-incumbent oligarchs, based on the results in model 2. The *Oligarch* interactions with the *Party Leader*, *Deputy Group*, and *Pro-Presidential* variables are statistically insignificant, models 3-5. We do find some evidence that partisanship and mandate do matter for the influence of oligarchs in model 6. Partisan oligarch elected in SMD seats are, based on the results of model 5, 14.1 percent more central. We also find that non-partisan oligarchs who are elected in a PR election are 21.6 percent more central. While the interaction terms using the *Non-partisan SMD* and *Partisan PR* variables are not statistically significant, they are, however, positive.

Figure 6 plots the posterior median marginal effect and 90% credible intervals of the *Oligarch* variable over the range of the *N of Parties* variable. Based on these results, oligarch

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Figure 6: Marginal Effect of *Oligarch* Over *N of Parties*, Model 7
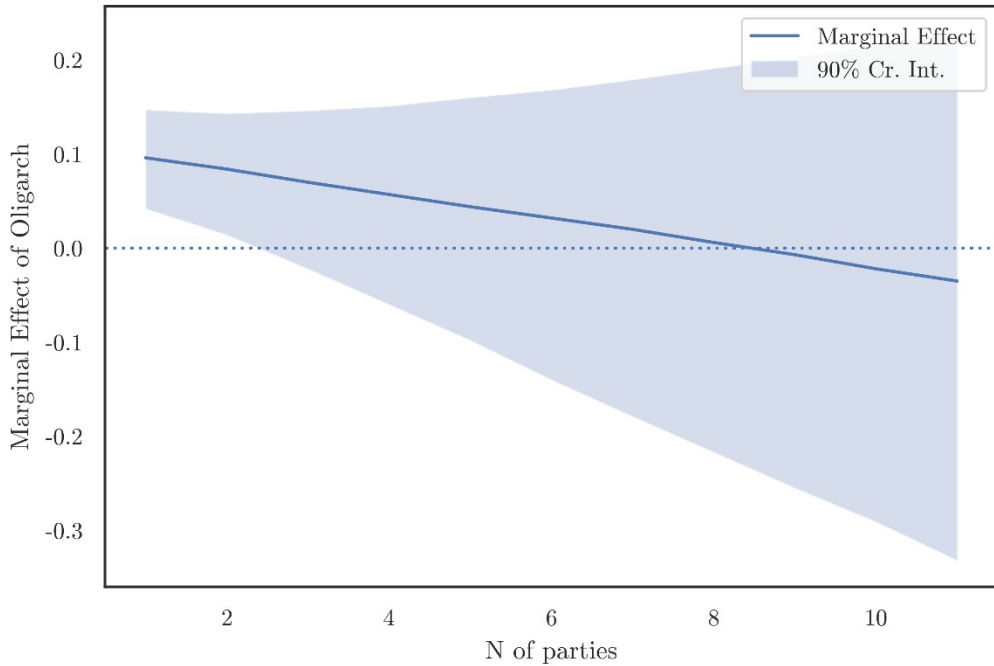
deputies who remained in a single party were, on average, 4.2 percent more central than were other deputies. As the number of parties a deputy joined increased, the marginal effect decreased; however, the result is not significant. These results suggest that oligarchs who remained in a single parliamentary party were more influential and that switching parties did not increase their influence.

Figure 7 plots the posterior median and 90% credible intervals for the marginal effect of the O*ligarch* variable over the range of our *Distance* variable. We find a statistically significant effect of the *Oligarch* variable at very low levels of the *Distance* variable, between 0 and 0.4. This suggests that oligarchs who were close to the floor median were more influential, in comparison to those oligarchs who were farther away. This is interesting given that the results for model 2 found that deputies at the extremes were more influential than were centrist deputies.

Figure *7*: Marginal Effect of Oligarch over Distance, *Model 8*
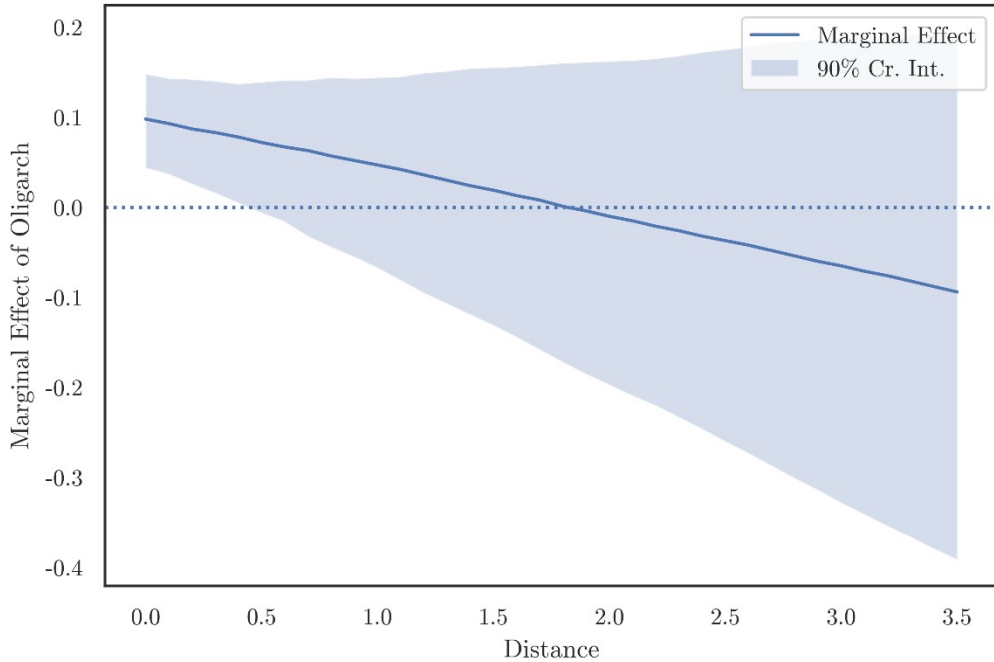
In the case of oligarch deputies, however, the results found in figure 7suggest a different story.

Conclusion

      Oligarchs are key players in post-communist Ukraine. Their economic resources coupled with their divisiveness makes them likely to be influential members of the Rada. Our statistical model shows that oligarchs were significantly more influential than were other deputies between 2000 and 2016. In fact, they were only slightly less influential, on average, than were party leaders. There is evidence that the influence of oligarch deputies was dependent on incumbency, the number of parties in which they served, and their ideological distance.

      This result, however, raises more questions than it answers. It is important to understand that oligarchs during this period were influential deputies. Yet, the result does not answer two

critical questions. First, what were their policy goals? The ability to influence votes on

aggregate is an important finding. We need to do more research, however, to ascertain whether

this influence carried over to policy outcomes. It is possible that oligarchs joined the Rada

simply to obtain immunity. The fact that they were influential, however, hints at a broader role.

Second, what was the source of their influence in this period? Given the patronal nature of

Ukrainian politics, it would not surprise anyone to find that oligarch deputies made deals with

other deputies to obtain support for positions on bills. However, it is also possible that some

deputies simply vote against the positions of oligarchs on principle. Centrality alone cannot

discriminate between these two positions. Of course, the reality is that both processes may be at

work. Regardless, more work must be done to answer this question.

Appendix

Table 1: Parameter Estimates for Model 1 (N=4,377)

Variable	5%	50%	95%	$\hat{R}$
Oligarch (1,0)	0.050	0.105	0.155	1.000
Incumbent (1,0)	0.719	0.742	0.767	1.002
Party Leader (1,0)	0.066	0.124	0.174	1.001
Deputy Group (1,0)	-0.277	-0.146	-0.041	1.000
Pro Pres (1,0)	-0.151	-0.058	0.035	0.999
P. SMD (1,0)	0.010	0.067	0.123	0.999
N.P. SMD (1,0)	-0.036	0.005	0.045	0.998
P. PR (1,0)	-0.016	0.039	0.093	1.003
N of Parties	0.009	0.021	0.032	1.003
Distance	0.139	0.164	0.192	0.998
Intercept	-2.189	-1.172	0.528	1.002
δ_{party}	0.252	0.286	0.332	0.998
$\delta_{convocation}$	0.112	1.027	2.887	1.006

Table 2: Parameter Estimates for Model 1 (N=4,377)

Variable	5%	50%	95%	$\hat{R}$
Oligarch (1,0)	0.046	0.153	0.252	1.001
Incumbent (1,0)	0.719	0.746	0.770	1.001
Party Leader (1,0)	0.069	0.124	0.177	0.999
Deputy Group (1,0)	-0.266	-0.151	-0.038	1.008
Pro Pres (1,0)	-0.149	-0.055	0.040	1.004
P. SMD (1,0)	0.016	0.069	0.126	1.001
N.P. SMD (1,0)	-0.036	0.003	0.043	1.002
P. PR (1,0)	-0.009	0.041	0.094	1.004
N of Parties	0.011	0.021	0.032	1.002
Distance	0.138	0.163	0.191	1.001
Interaction	-0.189	-0.065	0.052	0.999
Intercept	-2.231	-1.348	0.396	1.005
δ_{party}	0.252	0.288	0.332	1.003
$\delta_{convocation}$	0.065	0.942	2.531	1.012

Table 3: Parameter Estimates for Model 3 (N=4,377)

Variable	5%	50%	95%	$\hat{R}$
Oligarch (1,0)	0.054	0.109	0.158	1.000
Incumbent (1,0)	0.717	0.742	0.769	0.999
Party Leader (1,0)	0.073	0.129	0.180	1.002
Deputy Group (1,0)	-0.262	-0.147	-0.029	1.021
Pro Pres (1,0)	-0.139	-0.053	0.035	1.003
P. SMD (1,0)	0.019	0.071	0.129	1.003
N.P. SMD (1,0)	-0.035	0.006	0.046	1.000
P. PR (1,0)	-0.006	0.042	0.092	1.001
N of Parties	0.010	0.021	0.031	1.005
Distance	0.137	0.164	0.191	1.000
Interaction	-0.967	-0.356	0.065	0.999
Intercept	-2.233	-1.193	0.627	0.999
δ_{party}	0.249	0.286	0.331	1.000
$\delta_{convocation}$	0.103	1.031	2.873	1.010

Table 4: Parameter Estimates for Model 4 (N=4,377)

Variable	5%	50%	95%	$\hat{R}$
Oligarch (1,0)	0.074	0.127	0.178	1.000
Incumbent (1,0)	0.715	0.741	0.768	1.000
Party Leader (1,0)	0.071	0.123	0.177	1.001
Deputy Group (1,0)	-0.255	-0.140	-0.028	1.011
Pro Pres (1,0)	-0.137	-0.050	0.042	0.999
P. SMD (1,0)	0.017	0.070	0.125	1.000
N.P. SMD (1,0)	-0.034	0.007	0.046	1.002
P. PR (1,0)	-0.012	0.043	0.097	1.006
N of Parties	0.009	0.021	0.031	1.001
Distance	0.139	0.165	0.193	1.003
Interaction	-0.307	-0.160	-0.016	0.999
Intercept	-2.191	-1.187	0.546	1.007
δ_{party}	0.251	0.287	0.330	1.003
$\delta_{convocation}$	0.141	1.049	3.144	1.012

Table 5: Parameter Estimates for Model 5 (N=4,377)

Variable	5%	50%	95%	$\hat{R}$
Oligarch (1,0)	0.053	0.123	0.185	0.999
Incumbent (1,0)	0.717	0.744	0.770	1.003
Party Leader (1,0)	0.068	0.124	0.179	0.998
Deputy Group (1,0)	-0.259	-0.148	-0.032	1.000
Pro Pres (1,0)	-0.138	-0.048	0.041	1.005
P. SMD (1,0)	0.016	0.069	0.121	1.000
N.P. SMD (1,0)	-0.035	0.004	0.046	1.001
P. PR (1,0)	-0.013	0.040	0.088	1.002
N of Parties	0.011	0.021	0.031	1.000
Distance	0.137	0.164	0.190	0.999
Interaction	-0.172	-0.062	0.046	1.000
Intercept	-2.255	-1.316	0.612	1.005
δ_{party}	0.250	0.287	0.331	1.001
$\delta_{convocation}$	0.062	0.937	2.607	1.021

Table 6: Parameter Estimates for Model 6 (N=4,377)

Variable	5%	50%	95%	$\hat{R}$
Oligarch (1,0)	0.082	0.216	0.330	1.002
Incumbent (1,0)	0.716	0.742	0.767	1.000
Party Leader (1,0)	0.073	0.126	0.175	0.999
Deputy Group (1,0)	-0.248	-0.144	-0.025	1.005
Pro Pres (1,0)	-0.148	-0.055	0.041	1.003
P. SMD (1,0)	0.020	0.077	0.129	1.003
N.P. SMD (1,0)	-0.024	0.018	0.060	1.002
P. PR (1,0)	-0.006	0.048	0.098	1.002
N of Parties	0.010	0.020	0.031	0.999
Distance	0.139	0.164	0.190	1.008
OxPSMD	-0.269	-0.092	0.086	1.002
OxNPSMD	-0.348	-0.201	-0.037	1.002
OxNPR	-0.215	-0.079	0.069	1.004
Intercept	-2.245	-1.208	0.531	1.009
δ_{party}	0.251	0.286	0.330	0.999
$\delta_{convocation}$	0.111	0.981	2.862	1.015

Table 7: Parameter Estimates for Model 7 (N=4,377)

Variable	5%	50%	95%	$\hat{R}$
Oligarch (1,0)	0.059	0.109	0.160	1.001
Incumbent (1,0)	0.716	0.743	0.768	0.999
Party Leader (1,0)	0.068	0.124	0.180	1.003
Deputy Group (1,0)	-0.257	-0.142	-0.024	1.008
Pro Pres (1,0)	-0.153	-0.058	0.038	1.005
P. SMD (1,0)	0.017	0.068	0.121	1.001
N.P. SMD (1,0)	-0.035	0.004	0.044	1.000
P. PR (1,0)	-0.011	0.040	0.090	1.001
N of Parties	0.011	0.022	0.032	1.000
Distance	0.137	0.164	0.190	1.003
Interaction	-0.041	-0.013	0.013	1.009
Intercept	-2.180	-1.234	0.569	1.006
δ_{party}	0.250	0.289	0.331	0.999
$\delta_{convocation}$	0.121	0.988	2.791	1.007

Table 8: Parameter Estimates for Model 8 (N=4,377)

Variable	5%	50%	95%	$\hat{R}$
Oligarch (1,0)	0.074	0.127	0.178	1.000
Incumbent (1,0)	0.715	0.741	0.768	1.000
Party Leader (1,0)	0.071	0.123	0.177	1.001
Deputy Group (1,0)	-0.255	-0.140	-0.028	1.011
Pro Pres (1,0)	-0.137	-0.050	0.042	0.999
P. SMD (1,0)	0.017	0.070	0.125	1.000
N.P. SMD (1,0)	-0.034	0.007	0.046	1.002
P. PR (1,0)	-0.012	0.043	0.097	1.006
N of Parties	0.009	0.021	0.031	1.001
Distance	0.139	0.165	0.193	1.003
Interaction	-0.307	-0.160	-0.016	0.999
Intercept	-2.191	-1.187	0.546	1.007
δ_{party}	0.251	0.287	0.330	1.003
$\delta_{convocation}$	0.141	1.049	3.144	1.012

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