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Mengüaslan, Hikmet; Çelik, Sadullah

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WHAT DOES “BIG DATA” TELL? A NETWORK ANALYSIS APPROACH TO THE JUSTICE AND DEVELOPMENT PARTY’S ROLE PERFORMANCE IN THE MIDDLE EAST BETWEEN 2015 AND 2020

Hikmet Mengüaslan^{1*}, Sadullah Çelik²

¹Aydın Adnan Menderes University - Aydın, Turkey  <https://orcid.org/0000-0003-4836-5108> ✉ hikmet.menguaslan@adu.edu.tr

²Aydın Adnan Menderes University - Aydın, Turkey  <https://orcid.org/0000-0001-5468-475X> ✉ sadullah.celik@adu.edu.tr

Abstract: *In this paper, we exploited big data (The Global Database Events, Language and Tone - GDELT) by utilizing network analysis to elaborate on the Justice and Development Party’s (JDP) Middle East (ME) policy for 2015 and 2020 - our conceptual framework built on the role theory. We identified two dynamics - the positioning of the “Transatlantic” link in Turkish Foreign Policy’s (TFP) orientation and the shape and politics of the JDP elites’ conception of activism - based on which we developed two hypotheses to conceptualize the JDP’s role performance for the period: 1) There was a mismatch between national role conceptions and systemic role prescriptions for Turkey in the period of analysis; 2) This mismatch led the appeal of partnership with non-Western actors to rise. We utilized network analysis by exploiting the GDELT big dataset to test our hypotheses empirically. The empirical findings proved the validity of our conceptual arguments.*

Keywords: *Turkish Foreign Policy; Justice and Development Party; Network Science; Role Conflict; Big Data; Middle East*

INTRODUCTION

In this paper, we exploit big data (The Global Database Events, Language and Tone - GDELT) utilizing network analysis to elaborate on the Justice and Development Party’s (JDP) Middle East (ME) policy for 2015-2020. Our analysis builds on the conceptual framework of role theory. We choose JDP’s ME policy as a case in our study because we believe Turkey’s role performance in the ME in this period presents a remarkable case to observe the interaction of the agential and systemic dynamics of the foreign policy process. Since 2002, when the JDP government came to power, the framework of Turkish Foreign Policy (TFP) in the ME differs sharply from the Turkish official state mentality, which consists of Westernization, Laicism, reformism, and *status quo*-ism/non-involvement in regional issues as the central tenets of foreign policy-making (Mengüaslan 2016). The JDP’s ME policy, based on a conservative democrat identity that includes multilateralism, multi-dimensionalism, reformism, and activism as the main features, reflects the JDP elites’ multi-dimensional and assertive views on Turkey, as well as envisaging assertive foreign policy national role conceptions, putting at the center the activism (Başer 2015, 292-294). Assuming a multi-dimensional foreign policy framework envisions an assertive and active Turkey, the JDP elites adopted pro-active national role

conceptions for Turkey, especially in the ME. In this context, the Transatlantic role prescriptions for the JDP's pro-active ME policy have been supportive until the "Arab Revolts". However, the shifts led by the post-Arab Revolts developments have created a different strategic context in which an assertive TFP that diverges from the Transatlantic prescriptions seems to be unwelcomed.

Consequently, the JDP elites' divergent role conceptions drifted apart from multi-dimensionality, precluding the transformation of multi-dimensional activism into assertive unilateralism (Kutlu et al. 2021). Turkey's political appeal also diminished in the ME, and the relations soured with neighbors. The JDP elites euphemistically defined this delicate and competitive political context as precious loneliness (Gardner 2015).

We analyze 2015-2020 because, in this period, the systemic role prescriptions and the JDP's role conceptions demonstrated further divergence. The JDP elites have found themselves in a concretized context of precious loneliness, which set the stage for further divergence between the JDP elites' national role conceptions and the role prescriptions of the Transatlantic community. The more the Transatlantic community's role prescriptions did not satisfy Turkey's security and political concerns, the more the degree of activism shifted towards unilateralism, further diminishing the appeal of the Transatlantic support to TFP and increasing the desirability of strategic partnerships with non-Western powers.

Accordingly, we present two main arguments. First, the current approaches to the JDP's ME policy lack a holistic framework bringing together the systemic and agential dynamics of the foreign policy process (Görener and Ucal 2011; Kesgin 2020; Çuhadar et al. 2021; Kirişçi 2009; Murinson 2006). To this gap, we argue that role theory presents a holistic framework by combining systemic and agential dynamics of the foreign policy process to analyze the JDP's ME policy. The concept of role conflict enables us to conceptualize the implications of the mismatch between the JDP elites' national role conceptions and systemic role prescriptions for Turkey as a source of the JDP's role performance in the ME. However, the existing analyses utilizing role theory to study the JDP's ME policy emphasized the agential dynamics of role performance (Özdamar, Halistoprak, and Sula 2014; Akbaba and Özdamar 2019; Başer 2015; Ovalı 2013), which has left the interaction between agential and systemic dynamics of the foreign policy process as a source of conflictual role performance understudied. Our analysis differentiates from this line of analysis by exploring the mismatch between the national role conceptions and the systemic role prescriptions for Turkey as a source of the JDP's conflictual role performance in the ME for 2015-2020. Thus, our second argument is that by utilizing a statistical/computational network analysis approach to empirically test our conceptual arguments building on a holistic conceptualization of role conflict, we can provide a more robust and empirical analysis of the JDP's ME policy. Thus, as a contribution to the second gap, we utilize big data to test conceptual arguments through network analysis empirically. Network analysis can "offer a bridge to connect levels of analysis, and combine relations, attributes and structures" (Maoz 2012, 252), and more than "serving solely as a tool for examining a particular form of organization, it permits fine-grained conceptualization and measurement of structures" (Hafner-Burton, Kahler, and Montgomery 2009, 561). We argue that an empirical analysis of big data based on network analysis tests and complements the validity of theoretical arguments of the role theory approach.

“ROLE CONFLICT” AS A CONCEPTUAL FRAMEWORK FOR ANALYZING THE JDP’S ME POLICY

Role theory argues that states, as agents in the international system, assume foreign policy roles that inform the performance of foreign policy actions (Holsti 1970, 241). Role theory provides a methodological advantage in foreign policy studies by its holistic framework that brings together the systemic (role prescriptions) and agential (national role conceptions) dynamics of the foreign policy process (Chafetz, Abramson, and Grillot 1996; Aggestam 2018; Thies 2013). The concept of role conflict/contestation is introduced by role theory to conceptualize the interaction between systemic and agential dynamics (Cronin 2001; Cantir and Kaarbo 2012; Özdamar 2016). Role conflict is “between non-compatible, competing, or clashing role expectations about self and others between states and non-state actors” (Harnisch, Frank, and Maull 2011, 256). It occurs when 1) the capabilities of an agent do not match the requirements of the role; 2) there is an incompatibility between the national role conceptions and systemic role prescriptions.

Researchers who deploy the role theory approach to analyze the JDP’s ME policy have contributed majorly to studying national role conceptions (Özdamar 2016; Özdamar, Haliştoprak, and Sula 2014; Sözen 2016). We argue that this line of analysis emphasizes the agential dynamics of role performance (Özdamar, Haliştoprak, and Sula 2014; Akbaba and Özdamar 2019; Ovalı 2013; Başer 2015), which has left the interaction between agential and systemic dynamics of the foreign policy process as a source of conflictual role performance understudied. Thus, building on the concept of role conflict/contestation, our analysis differentiates from this line of analysis by exploring the mismatch between the national role conceptions and the systemic role prescriptions for Turkey as a source of the JDP’s conflictual role performance in the ME for the period of 2015-2020.

To analyze the JDP’s role performance in the ME between 2015 and 2020, we elaborate on two dynamics that reflect the interaction between systemic and agential elements of the foreign policy process. The first dynamic is the JDP elites’ conception of activism (Kuşku-Sönmez 2019; Aydın Çakır and Arıkan Akdağ 2017; Kaliber and Kaliber 2019) in the ME. We define the concept of activism as proactively pursuing ambitious foreign policy goals, being assertive and multi-dimensional. Since 2002, when the JDP government came to power, the framework of TFP in the ME differs sharply from the Turkish official state mentality, consisting of Westernization, Laicism, reformism, and *status quoism*/non-involvement in regional issues as the central tenets of foreign policy-making (Menguaslan 2016). The JDP’s ME policy, based on a conservative democrat identity that includes multilateralism, multi-dimensionalism, reformism, and activism as the main features, reflects the JDP elites’ multi-dimensional and assertive views on Turkey, as well as envisaging assertive foreign policy national role conceptions, putting at the center the activism (Başer 2015, 292-294). Assuming a multi-dimensional foreign policy framework envisions an assertive and active Turkey, the JDP elites adopted pro-active national role conceptions for Turkey, especially in the ME.

The second dynamic is the positioning of the Transatlantic link in TFP’s orientation (Oğuzlu 2016, 2018; Haugom 2019; Keyman and Gisclon 2017). What we mean by this dynamic is the collaboration/competition with the Transatlantic partners and contributing to the liberal

international order championed by the US and European countries. We think that the shifts in the positioning of the Transatlantic link, especially after the Arab Revolts, have been a major determinant in Turkey's conflictual role performance. Because although the systemic role prescriptions for the JDP's proactive ME policy were supported, at least until the Arab Revolts, the developments following the Arab Revolts have changed the strategic context, making an assertive TFP that departs from the Transatlantic prescriptions seem unwelcome. A remarkable instance of this mismatch can be seen in the divergent views on confronting the expansion of ISIS and controlling the implications of the Syrian crisis (Kara and Sözen 2016, 61-62). The Transatlantic community expected Turkey to act as a buffer in confrontation with the ISIS threat and contain the Syrian refugees (Keyman 2016, 2283-2284) while emphasizing Turkey's role as a NATO ally.

On the other hand, the JDP elites were interested in strengthening Turkey's political, economic, and ideological influence by supporting the Muslim Brotherhood in the post-Arab Revolts context (Akbaba and Özdamar 2019, 99). For instance, the JDP elites' conception of "Muslim identity", previously endorsed by the Transatlantic community as an important feature of "the role model" in promoting democratization and economic reforms, was re-defined and turned into one that is informed by Sunni orientations to consolidate Turkey's power capabilities. Due to divergent views on Turkey's role in these burning issues, the JDP elites' activist role conceptions produced competitive role performances (Ayata 2015, 110). Kaliber and Kaliber argue that in the first decade of the JDP governments (2002-2012), the foreign policy discourse gradually shifted from de-Europeanization to anti-Westernism, resulting in situating the West as the other in Turkey's identity (Kaliber and Kaliber 2019, 8-10) and decentering of Turkey's Western orientation. Moreover, The JDP elites' conception of activism, lacking Transatlantic support, made ME policy more issue-centric and competitive. With an empirical study of international agreements in which Turkey took part during the JDP governments, Çakır and Akdağ demonstrate that while Turkey was actively involved in issues relating to sub-Saharan Africa and Latin America from 2007 to 2011, the pro-active and multi-dimensional policies dramatically decreased between 2011 and 2015 and, Turkey's involvement in the international organizations gradually decreased under JDP governments (Aydın Çakır and Arıkan Akdağ 2017, 350-351).

Consequently, the JDP elites' divergent role conceptions drifted apart from multi-dimensionalism, precluding the transformation of multi-dimensional activism into assertive unilateralism. Turkey's political appeal also diminished in the ME, and the relations soured with neighbors. The JDP elites euphemistically defined this delicate and competitive political context as precious loneliness (Gardner 2015).

From 2015 to 2020, we saw further growth of multipolarity in the regional system of the ME as the burning issue of the Syrian crisis, along with the containment of ISIS, directly involved the US and the non-Western actors in the ME geopolitics. On the one hand, Russia and Iran financially and militarily supported the al-Assad regime against regime opponents. On the other, the Trump administration in the US signaled more active policy in the ME by criticizing the previous Obama administration's retrenchment policy as deconstructing the region's US leadership.

In such a complicated context, when the JDP elites could not guarantee what they expected from the Transatlantic community relating to the 2016 coup attempt in Turkey, they started further questioning the sincerity of their strategic partners. They accelerated their search for autonomy, particularly in strategic issues. As a result, national role conceptions of activity grew more unilateral (Aras 2017, 7-9), according to President Erdogan's speech at the Justice Forum on 10 January 2018: "Our motto 'the world is bigger than 5' is the biggest-ever rise against global injustice" (Erdoğan 2018).

The re-defined conception of activism was to produce two key results: three military operations into northeastern Syria (Euphrates Shield, Olive Branch, and Peace Spring) and procurement of military missile systems of S-400 from Russia (Oğuzlu 2016, 137), which together brought neither rapprochement between Turkey and the US nor the solution for Turkey's security and political concerns but turning TFP's activism into a more interventionist and unilateral one (Dalacoura 2017, 3-4). Firstly, the role prescriptions for Turkey demonstrated that autonomous actions would not be supported, especially by the US. President Trump urged Turkey not to launch a military offensive against the Kurdish-led forces in northern Syria (BBC News 2019). Although President Erdogan stated that "Turkey is not in Syria for oil or land, but to secure its borders" (Sevinc and Ozkan 2020). Turkey's military operations attracted direct opposition from the US. The US was not only declining the interventionist policies of Turkey but also reluctant to support the Syrian opposition (Altunışık 2016; Ahmad 2015, 17) due to deep concerns about the expansion of the ISIS threat and suspicions about the usefulness of the fragmented opposition groups in Syria (Orhan, Duman, and Pirinççi 2014). This led to conflicting alliances such that the US preferred to ally with the Syrian Democratic forces-PYD in the Syrian crisis and fight against ISIS while preventing Russia and Iran from penetrating Syria.

Secondly, as mentioned above, the JDP elites' feeling of exclusion from the Transatlantic community was to produce another concrete issue of divergence between the partners - Turkey's purchase of the S-400 missile system from Russia in 2019. The US unsurprisingly reacted very harshly, as US Vice President Pence stated: "Turkey must choose: Does it want to remain a critical partner in the most successful military alliance in the history of the world? Or does it want to risk the security of that partnership by making reckless decisions that undermine our alliance?" (Pence 2019).

Due to divergent views on Turkey's role in the ME, Turkey was suspended from the F-35 fighter jet program and imposed with the CAATSA sanctions by the US. However, rather than preventing Turkey from following a unilateral and interventionist policy, these actions further drifted Turkey apart from the strategic partnership with the Transatlantic community. Turkey continued to involve in close cooperation with Iran and Russia in the Syrian crisis (the Astana and Sochi processes) while being interested in Chinese economic initiatives (One Belt One Road Initiative) (Yang 2020).

From 2015 to 2020, the JDP elites found themselves in a concretized context of precious loneliness, which set the stage for further divergence between the JDP elites' national role conceptions and the role prescriptions of the Transatlantic community. The more the Transatlantic community's role prescriptions did not satisfy Turkey's security and political concerns, the more the degree of activism shifted towards unilateralism, further diminishing the

appeal of the Transatlantic support to TFP and increasing the desirability of strategic partnerships with non-Western powers.

Thus, we argue that the conception of activism and the former dynamic proves to be a meaningful litmus test to make sense of the changes in JDP's ME policy. Based on the two dynamics we identify, we develop two hypotheses regarding the JDP's role performance in the ME between 2015 and 2020:

1. There is a mismatch between national role conceptions and systemic role prescriptions for Turkey in the analysis period.
2. This mismatch led the appeal of partnership with non-Western actors to rise.

We empirically test these hypotheses by network analysis approach exploiting the GDEL dataset's big data.

THE GDEL: BIG DATA SOURCE

The GDEL database provides the big data source in our analysis. The GDEL dataset is a valuable resource for scholars of international relations as it contains a wealth of information on global events. The dataset is updated daily and includes information on news outlets from around the world, making it a valuable resource for researchers interested in understanding global news dynamics. Additionally, the GDEL dataset can track events over time, allowing researchers to identify patterns and trends in global news. Starting in 2015, GDEL has a mesh drawing function that allows it to visualize and analyze its Global Knowledge Graph Network using the open-source Gephi network package. Powered by Google Ideas, the GDEL database is reliable because it constantly updates the latest news worldwide.

NETWORK ANALYSIS

Networks are defined as interconnections between nodes (Figure 1) representing each network's units (Hafner-Burton, Kahler, and Montgomery 2009). Network analysis is a technique used to represent and analyze social relationships mathematically by applying link-node structure. It visualizes network relationships through mathematical techniques based on graph theory. Any ties between the nodes can be examined via network analysis which allows exploring and measuring the patterns of enduring relationships between nodes and structures in networks.

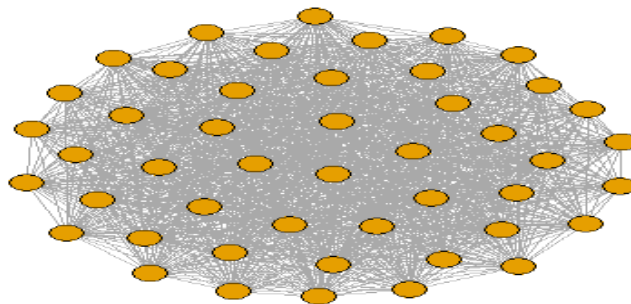


Figure 1: A Network Model (Source: Authors' depiction)

Several metrics can be used in network analysis. In the following, there are brief definitions of the metrics utilized in our analysis:

Node: A node is a point in a network where two or more lines intersect. In network analysis, nodes are used to represent the vertices of a graph, and edges between nodes are used to represent relationships between vertices. The node has no inherent meaning but is useful as it can represent a point in a network. Nodes can be connected by links that represent relationships between nodes. The nodes in this work are people.

Weight: Weight in social network analysis refers to assigning a numerical value to the relationships between nodes in a network. The weight of a relationship reflects the importance or intensity of the connection between two nodes. Weighted can indicate several factors, such as the duration of the relationship, the frequency of interaction, the emotional intensity of the relationship, or the economic value of the relationship. Using the Minkowski metric, weighted is calculated as in equation (1) (Biswas and Sharma 2020, 16).

$$d_p(x, y) = \left(\sum_{i=1}^n w_i (x_i - y_i)^p \right)^{1/p} \quad (1)$$

Weighted degree: The Weighted Degree measures a node's importance in a network. It is calculated by multiplying the degree of a node by the weight of the edge connecting the node to other nodes (Thai, Nguyen, and Shen 2015). This measure is used to identify the most important nodes in a network (Zhou et al. 2020). The weighted degree of a v vertex is calculated as in equation (2) (Fukunaga and Nagamochi 2010, 246).

$$d_w(v; E) = \sum_{e \in \delta(v; E)} w(e, v) \quad (2)$$

Degree centrality: Degree centrality measures a node's links in a network. It is a simple way to measure the importance of a node (Chen, Dress, and Yu 2014). For each i vertex, degree centrality in a network is calculated as follows (Srinivasan et al. 2020).

$$D(i) = \frac{1}{n-1} \sum_{j=1}^n A_{ij} \quad (3)$$

In the (3) equation, A_{ij} is the ij – th element of the adjacency matrix.

Closeness: Closeness measures the distance between two nodes in a social network. It is computed as the sum of the distances between the two nodes and all their friends. The closeness of a v vertex is calculated as in equation (4) (Metcalf and Casey 2016).

$$C(v) = \sum_{w \in G} \frac{1}{d(v, w)} \quad (4)$$

Closeness centrality: Closeness centrality is a metric that shows how close a node is to all other nodes in the network. Using this metric, important nodes in the network are determined. Examples of closeness centrality might include identifying the most important people in a social network, the most important nodes in a communication network, or the most important nodes in a business network (Zhou et al. 2020).

Betweenness centrality: Betweenness centrality expresses a node's importance in connecting other nodes (Baker 2018). Nodes with high betweenness centrality are more important for connecting different network parts than nodes with low betweenness centrality. An example of a node with high Betweenness centrality would be a connector of two different groups of people, such as a bridge between two neighborhoods. The betweenness centrality of a v vertex is calculated as in equation (5) (Zhao and Cen 2013).

$$b(v) = \sum \frac{\sigma_{uw}(v)}{\sigma_{uw}} \quad (5)$$

Where σ_{uw} is the number of shortest paths between vertices u and w . $\sigma_{uw}(v)$ indicates the shortest paths between u and w passing through the v vertex (Zhao and Cen 2013).

Clustering Coefficient: The clustering coefficient measures the amount of clustering in a network. It is a measure of the strength of the connections between nodes. The clustering coefficient is calculated by dividing the number of connections between nodes by the total number of possible connections (Makhijani et al. 2022). In network analysis, the clustering coefficient is calculated as in equation (6) (Gürsakil 2016).

$$C_i = \frac{2L_i}{k_i(k_i - 1)} \quad (6)$$

Here L_i , i specifies the number of connections between node k_i neighbors.

Eigenvector centrality: "Eigenvector centrality is a measure of the importance of a node in a network. It is calculated by multiplying the node's degree by its eigenvector centrality score. This score is determined by how close the node is to all other nodes in the network" (Thai, Nguyen, and Shen 2015, 299). Nodes with high eigenvector centrality scores are more important than nodes with low scores. Eigenvector centrality is calculated mathematically as in equation (7) (Salman 2018).

$$\lambda C = AC$$

$$(C_i)^E = \frac{1}{\lambda} \sum_{j=i}^n \alpha_{ij} (C_j)^E \quad i = 1, 2, \dots, n \quad (7)$$

In the equation, A is the neighborhood matrix of the network, and λ is the largest eigenvalue of the A matrix. Also, nodes j are neighbors of node i .

EMPIRICAL DESIGN

We searched for the ties between President Erdogan and affiliated politicians/leaders. We visualized the complex relationship between nodes in the networks (Figures 2, 3, 4, 5, 6, 7) using the Fruchterman-Reingold algorithm and open-source Gephi software. These networks are

formed by drawing a line between the names of two or more people mentioned in the news. Each node in the network represents an individual. We limited the number of nodes in the networks to 250 for interpretation. Since real-life events are reflected in the news media with time delay, we conduct our analysis yearly. Thus, the yearly drawn networks and the calculated measurements are like summaries of the many news published in a certain period.

In our analysis, the networks are non-directional networks, like having two people in the same photo, news, or text, like co-authoring or kinship networks. The lines drawn between the nodes might represent a positive, negative, or neutral relationship between people (nodes). It means that the networks themselves cannot provide information yet requires interpreting. Similarly, the groups formed in the networks partly shed light on why the groups formed - conjectural or permanently - and how nodes are included/excluded - issue-centric or multi-dimensional, about which the networks only visualize the complex relationships, still entailing a detailed theoretical examination.

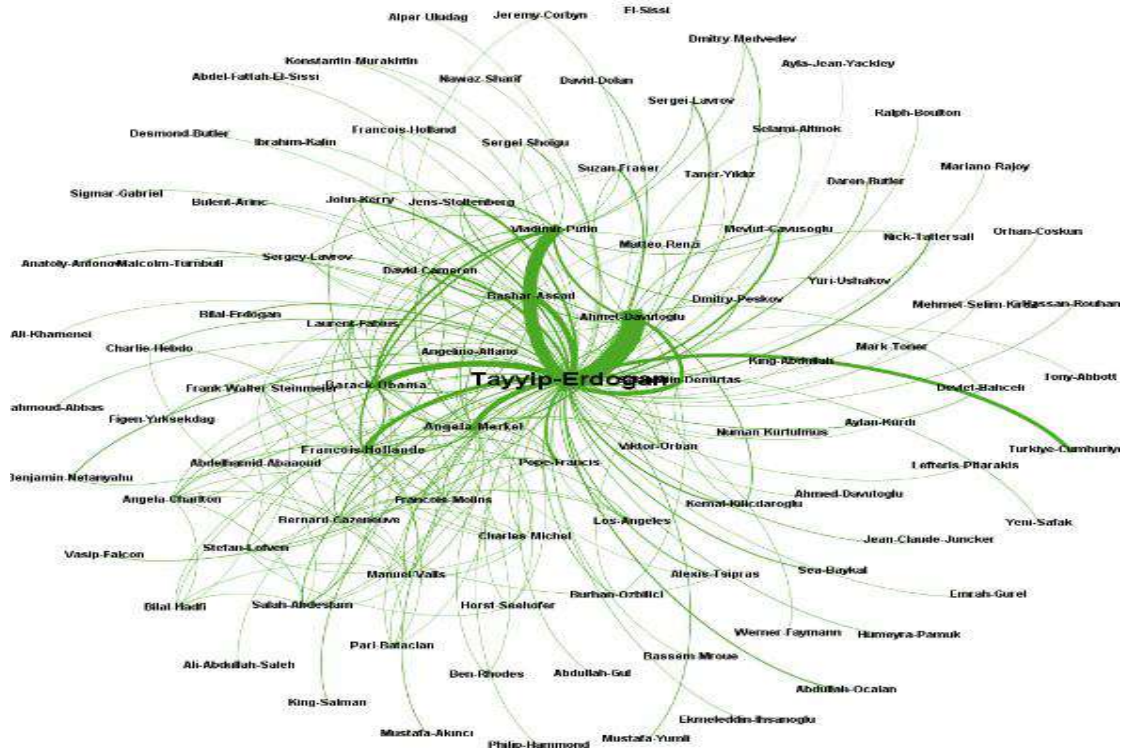


Figure 2: 2015 Network (Source: Authors' depiction)

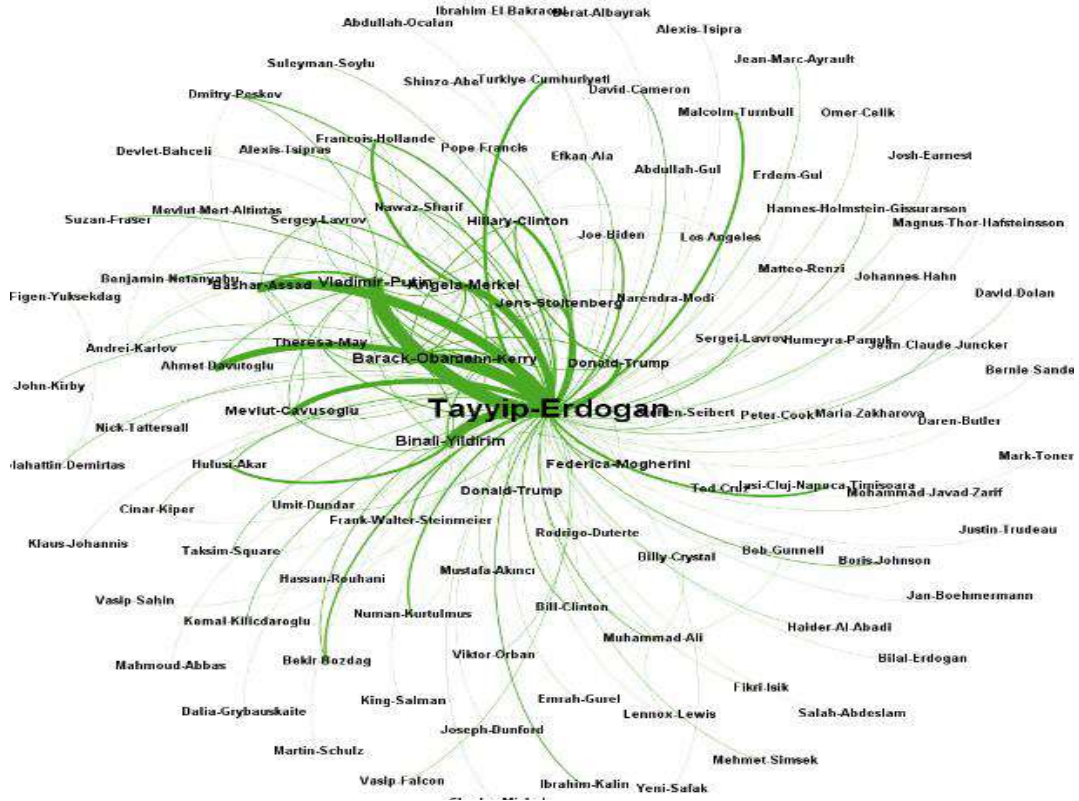


Figure 3: 2016 Network (Source: Authors' depiction)

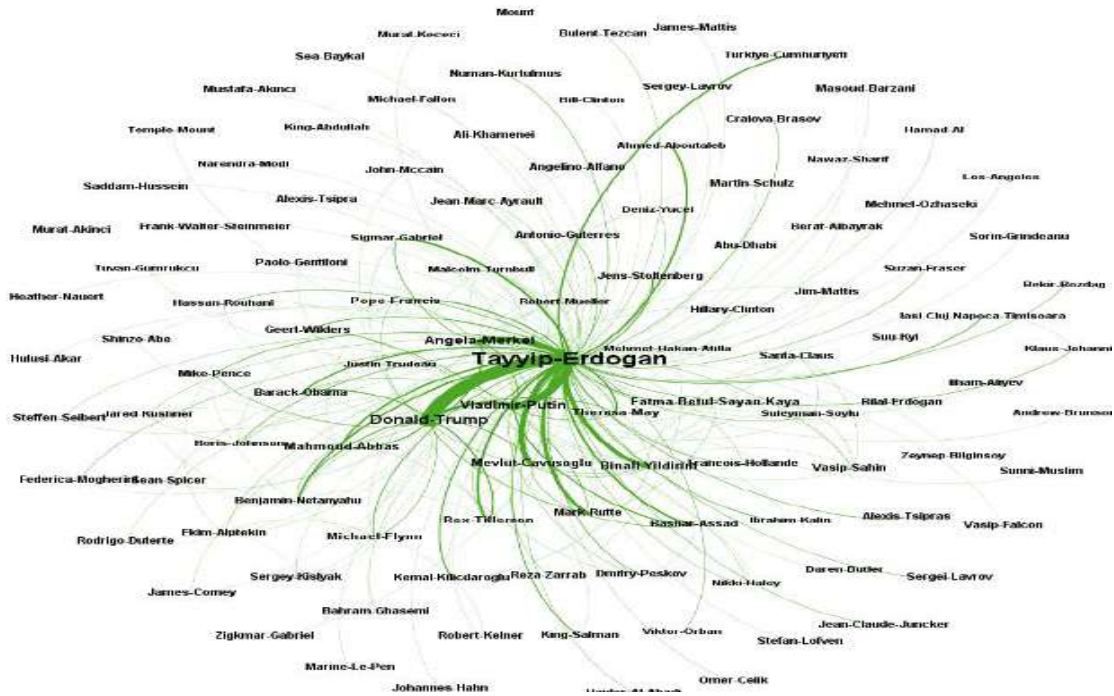


Figure 4: 2017 Network (Source: Authors' depiction)

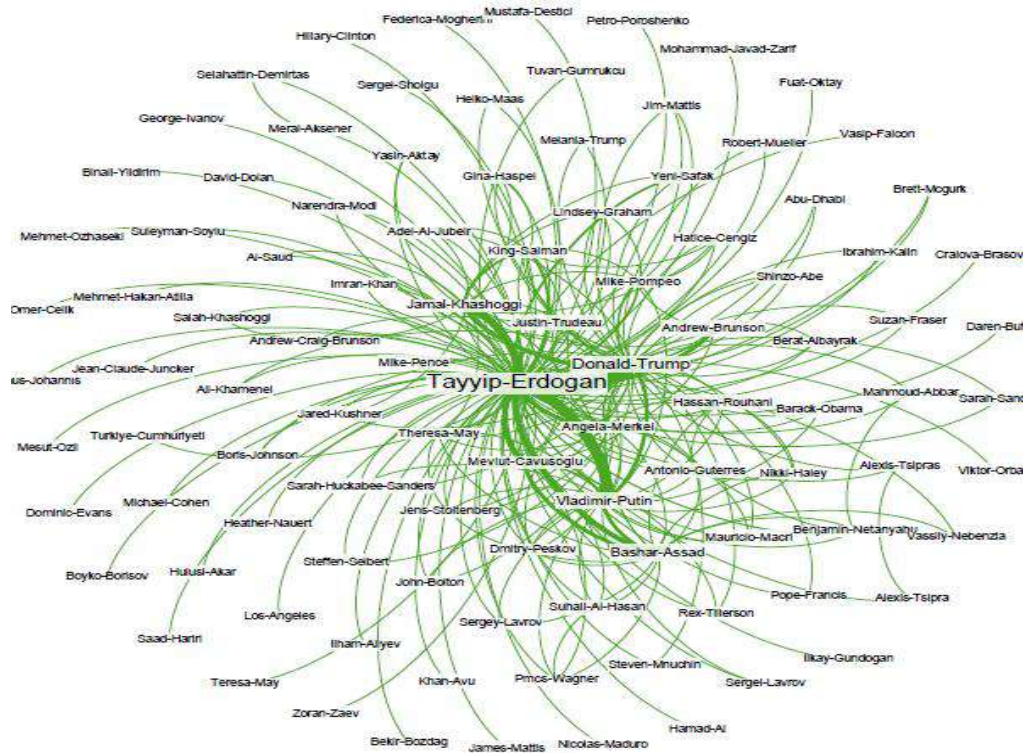


Figure 5: 2018 Network (Source: Authors' depiction)

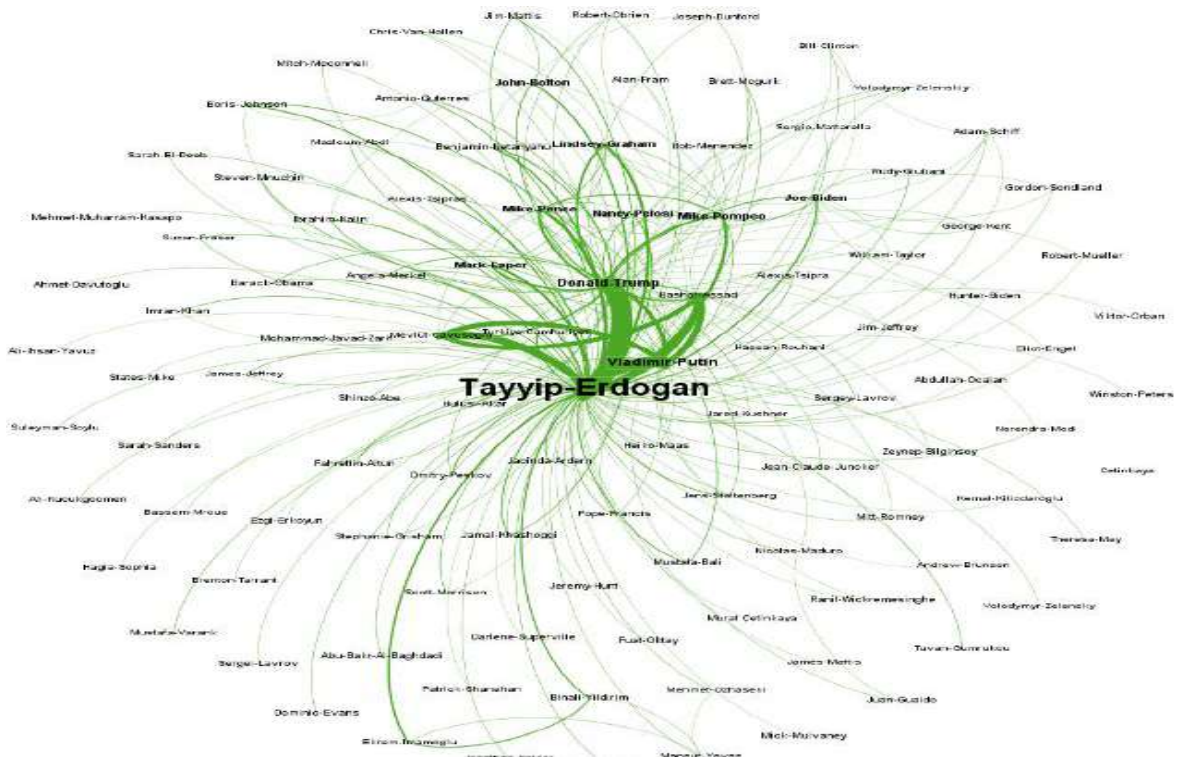


Figure 6: 2019 Network (Source: Authors' depiction)

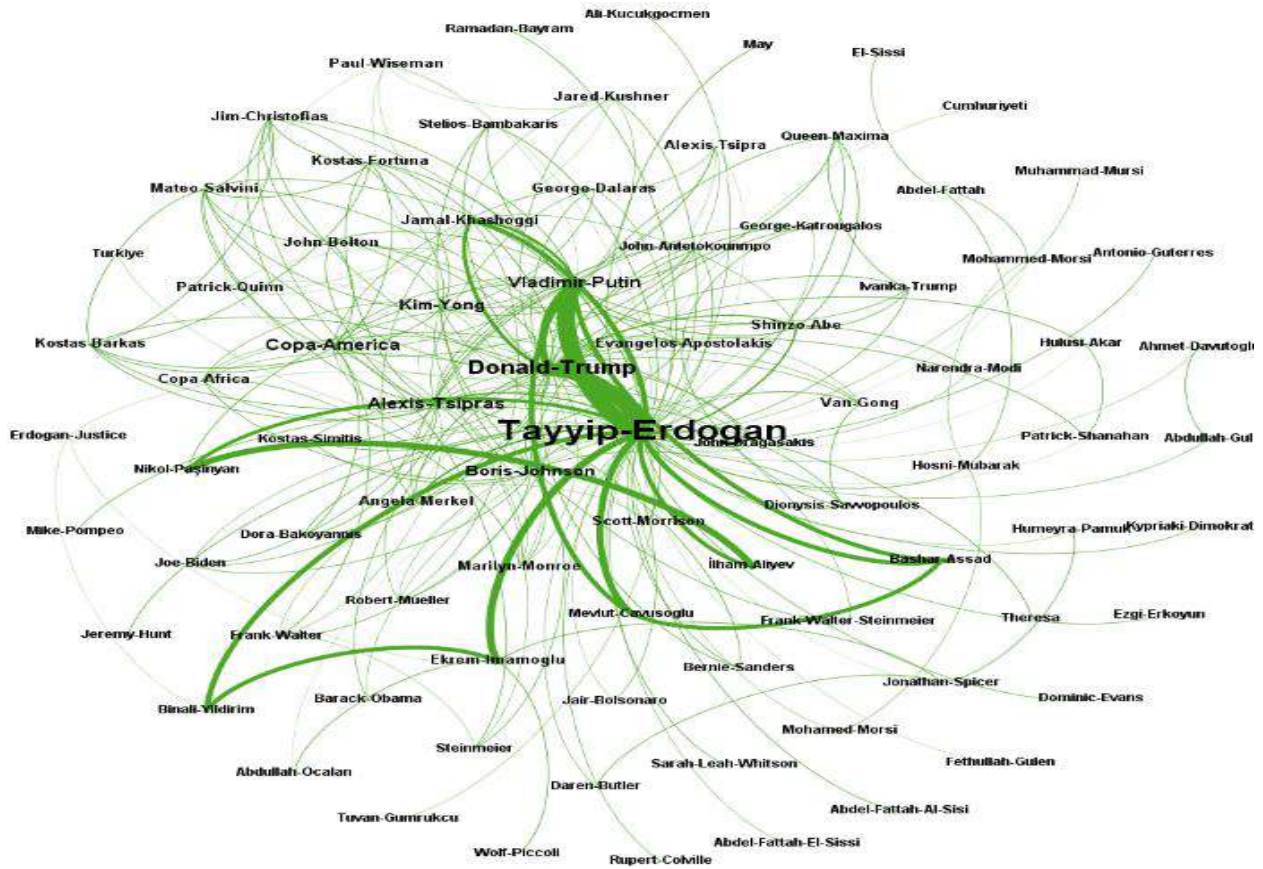


Figure 7: 2020 Network (Source: Authors' depiction)

Therefore, we first measured the degree distributions to test the power-law distribution. The degree distributions of the networks we draw demonstrate that networks are independent and conform to the power-law distribution, i.e., a small number of nodes have several linkages in networks, while most nodes have fewer ties. In addition, when the figures below are examined, it is seen that all shapes are defined with a curve from top left to right. The visual form also shows that networks are independent of scale. Regarding power theory, it can be concluded that power is concentrated in the center of the networks of the analysis (Figures 8, 9, 10, 11, 12, 13).

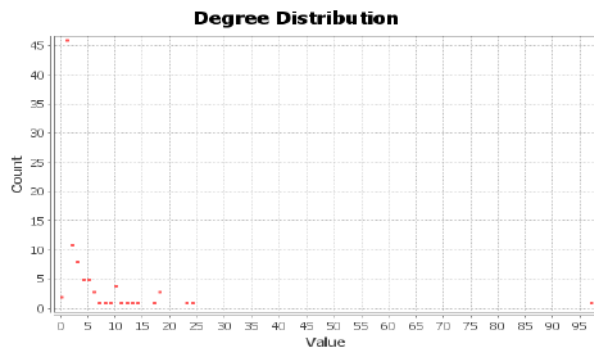


Figure 8: Degree Distribution 2015

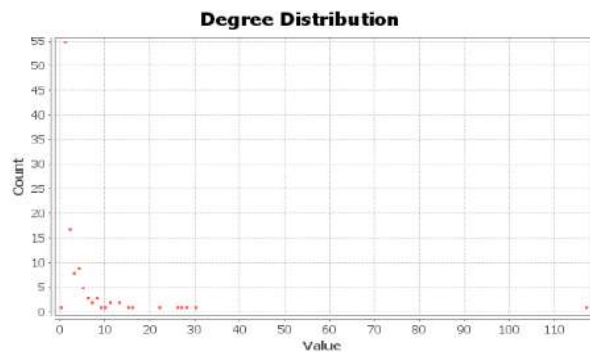


Figure 9: Degree Distribution 2016

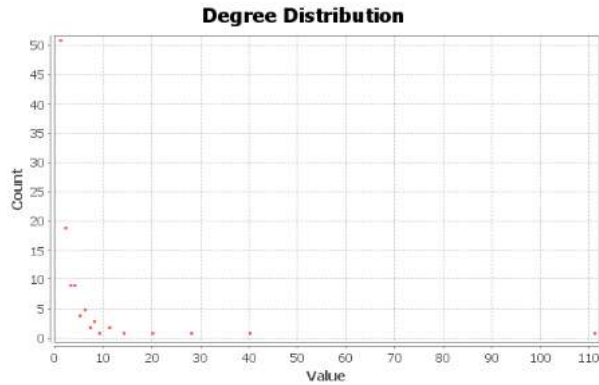


Figure 10: Degree Distribution 2017

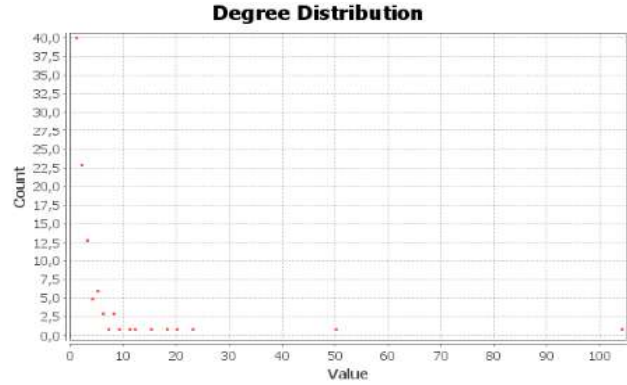


Figure 11: Degree Distribution 2018

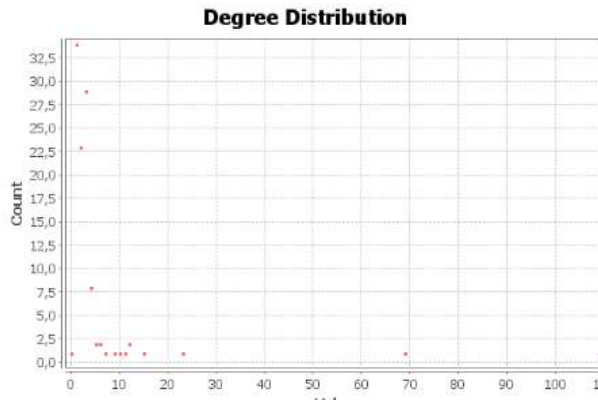


Figure 12: Degree Distribution 2019

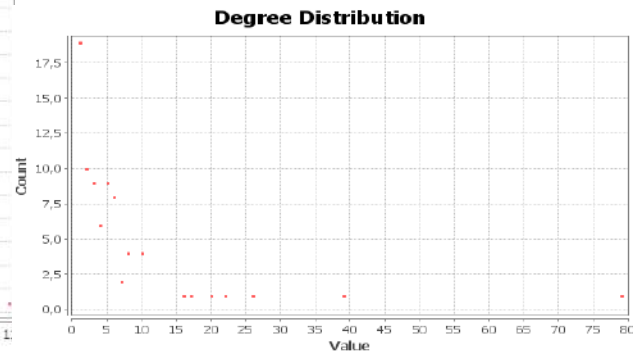


Figure 13: Degree Distribution 2020

Second, we calculated the weighted degrees of nodes in the networks to identify the changes in the relationship - such as closeness and density - between the nodes (Table 1). Based on the relationship between nodes in news media networks, we tracked the annual changes and identified general trends regarding Turkey's foreign policy activism. Table 1 demonstrates the changes in weighted degrees of nodes in the networks we draw for the period between 2015 and 2020. Since we searched for the affiliated politicians, bureaucrats, and leaders with President Erdogan, the weight of his node is the highest in each network. The changes in weighted degrees imply how the relationships between the nodes change in closeness and density.

Third, we conduct a modularity analysis to identify clusters in the news media networks. Modularity is a cluster quality metric measuring whether the number of in-cluster edges exceeds its expected value and reflects the harmony of nodes within a community. Furthermore, based on the clusters formed in the media networks, we explored the changes and continuities in Turkey's cooperation with other countries.

Table 1: Weighted Degrees of Nodes between 2015 and 2020 (Source: Authors' depiction)

Weighted Degrees of Nodes in 2015		Weighted Degrees of Nodes in 2016	
Tayyip-Erdoğan	0.850	Tayyip-Erdoğan	0.603
Ahmet-Davutoğlu	0.148	Vladimir-Putin	0.114
Vladimir-Putin	0.123	Binali-Yildirim	0.103
Francois-Hollande	0.094	Barack-Obama	0.103
Angela-Merkel	0.093	Angela-Merkel	0.074
Barack-Obama	0.090	John-Kerry	0.066
Bashar-Assad	0.071	Bashar-Assad	0.061
David-Cameron	0.045	Donald-Trump	0.044
Bernard-Cazeneuve	0.044	Mevlüt-Cavuşoğlu	0.043
Selahattin-Demirtaş	0.042	Theresa-May	0.023
2017		2018	
Tayyip-Erdoğan	0.624	Tayyip-Erdoğan	0.600
Donald-Trump	0.208	Donald-Trump	0.251
Vladimir-Putin	0.123	Vladimir-Putin	0.129
Angela-Merkel	0.086	Jamal-Khashoggi	0.106
Mevlüt-Cavuşoğlu	0.055	Bashar-Assad	0.103
Binali-Yildirim	0.049	Mevlut-Cavusoglu	0.075
Rex-Tillerson	0.033	Angela-Merkel	0.055
Mahmoud-Abbas	0.032	King-Salman	0.044
Benjamin-Netanyahu	0.028	Mike-Pompeo	0.043
Theresa-May	0.027	Andrew-Brunson	0.042
2019		2020	
Tayyip-Erdoğan	0.521	Tayyip-Erdoğan	0.540
Donald-Trump	0.270	Donald-Trump	0.247
Vladimir-Putin	0.151	Vladimir-Putin	0.231
Bashar-Assad	0.131	Bashar-Assad	0.095
Mevlut-Cavusoglu	0.089	Mevlut-Cavusoglu	0.085
Mike-Pence	0.045	Jamal-Khashoggi	0.077
Mike-Pompeo	0.041	Ekrem-İmamoglu	0.073
Lindsey-Graham	0.035	Copa-America	0.062
Mark-Esper	0.031	Nikol-Paşinyan	0.058
Joe-Biden	0.031	Ilham-Aliyev	0.056

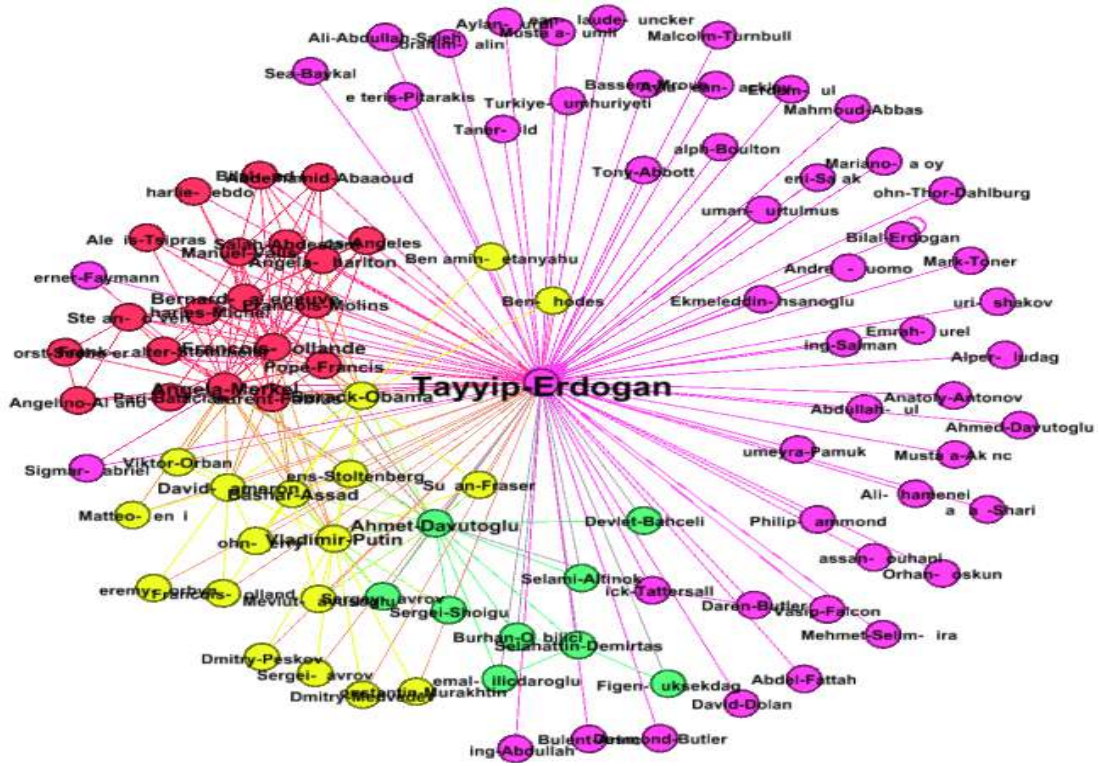


Figure 14: Modularity 2015 (Source: Authors' depiction)

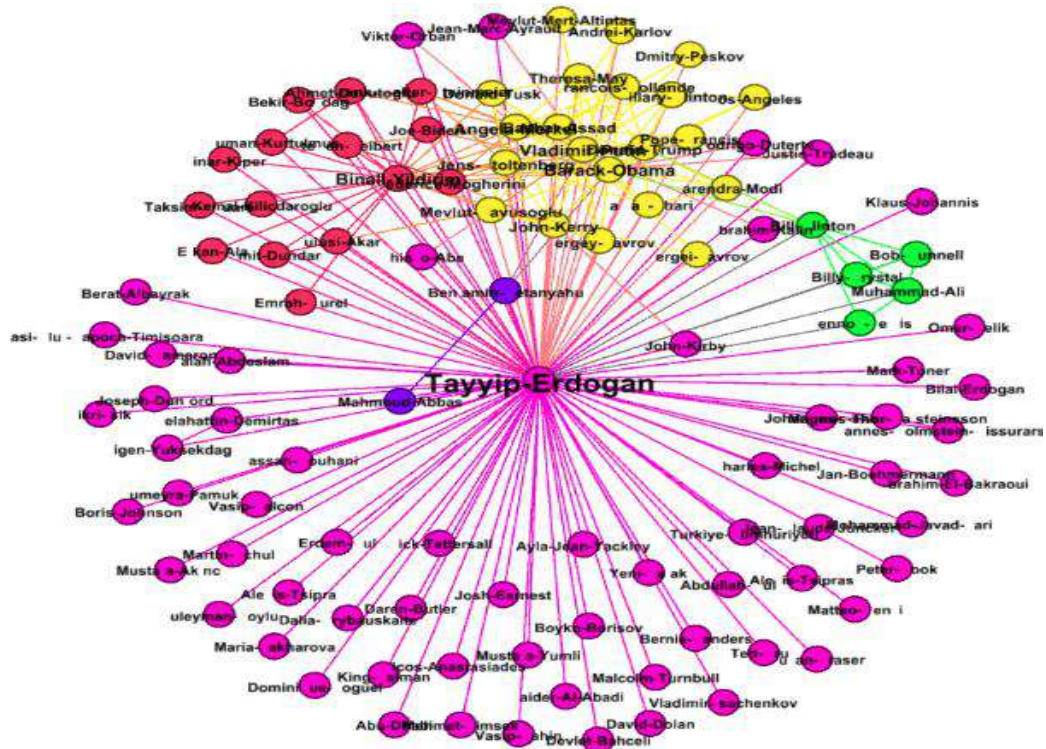


Figure 15: Modularity 2016 (Source: Authors' depiction)

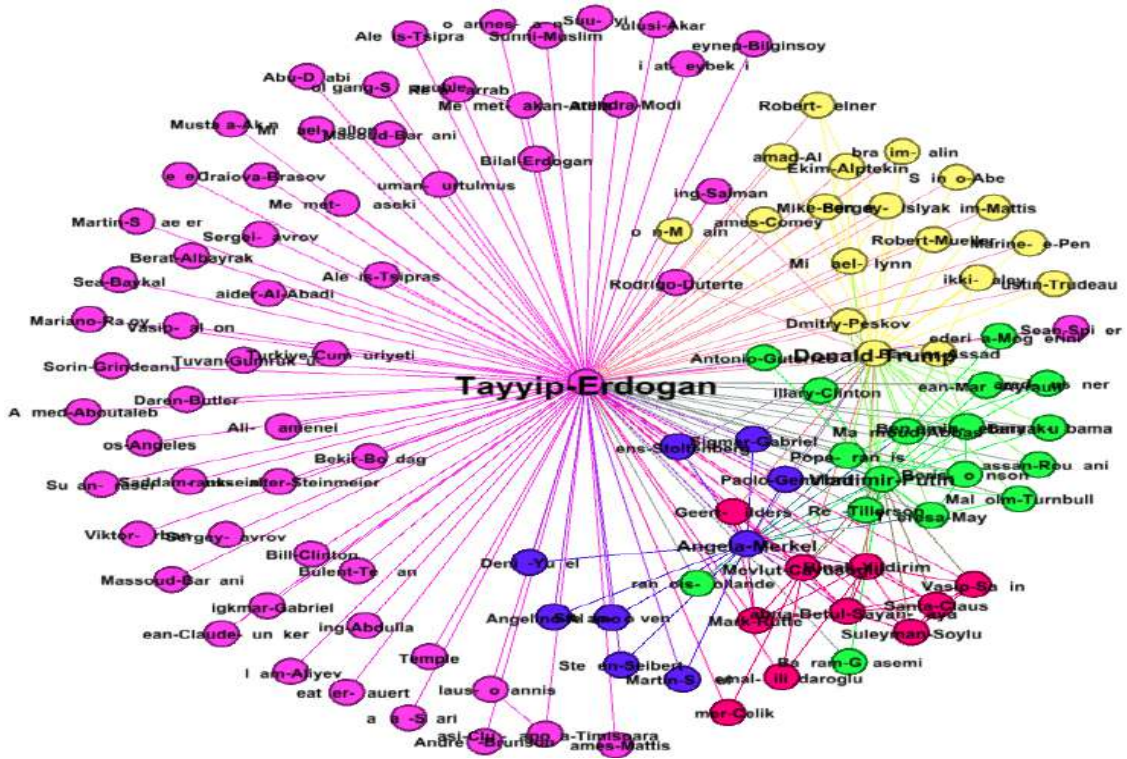


Figure 16: Modularity 2017 (Source: Authors' depiction)

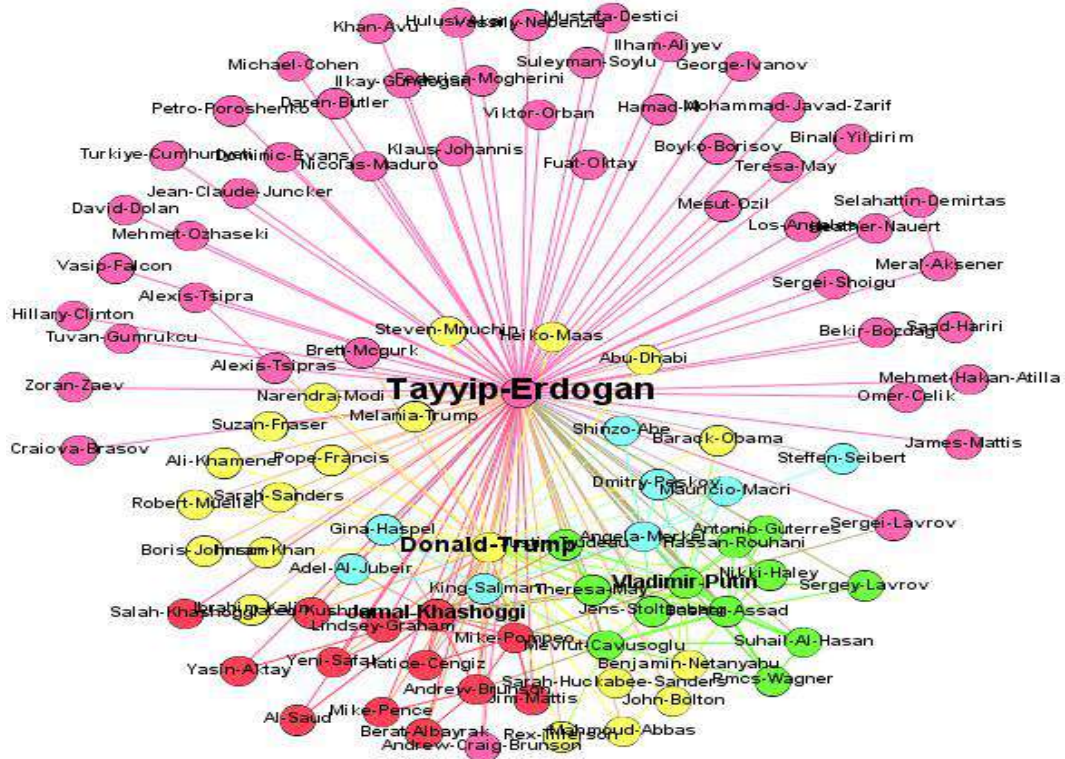


Figure 17: Modularity 2018 (Source: Authors' depiction)

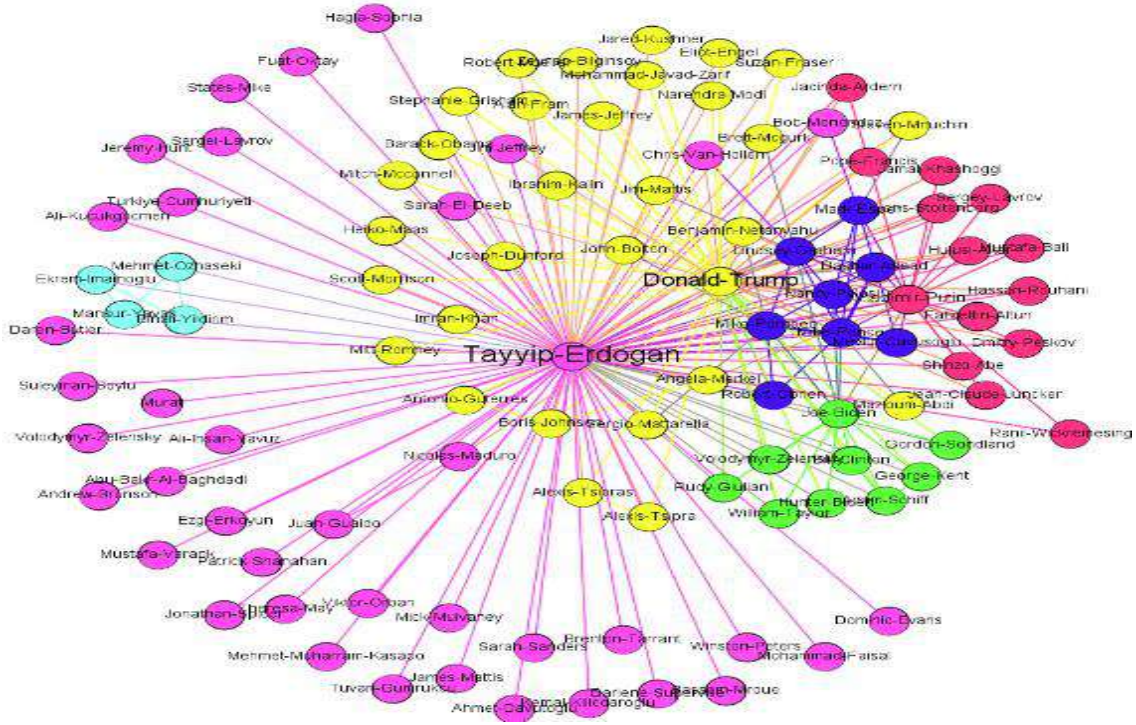


Figure 18: Modularity 2019 (Source: Authors' depiction)

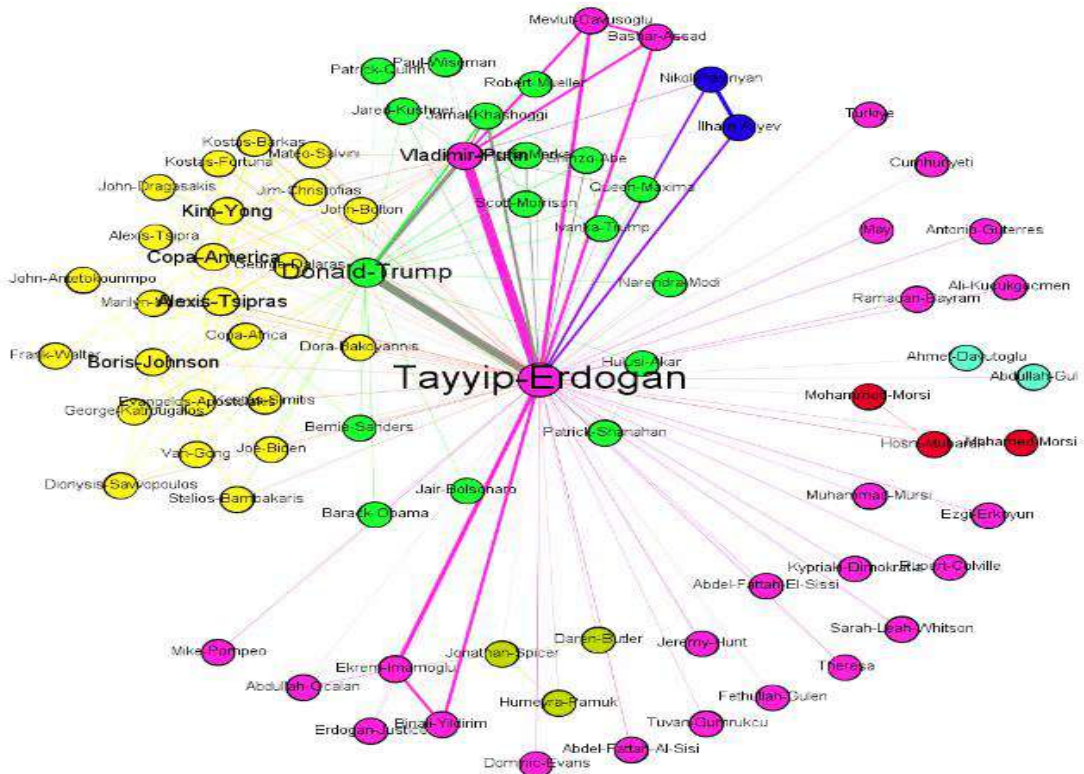


Figure 19: Modularity 2020 (Source: Authors' depiction)

DISCUSSION

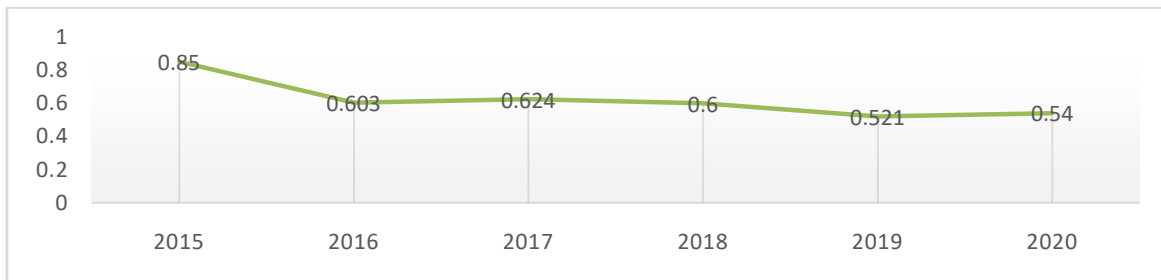
In the role theory section, we argued that role performance reflects the degree of congruence between national role conceptions and systemic role prescriptions. Any incongruity between these dynamics results in a serious conflictual role performance.

Accordingly, the weighted degrees (Table 1) show that network analysis enables the successful capture of the repercussions of international as well as local developments such as:

1. The impact of the presidential system and the elimination of the Prime Minister's office left President Erdoğan the most prominent figure in TFP, which is demonstrated by the gradual diminishing of the weighted degrees of Prime Ministers Ahmet Davutoglu in 2015 and Binali Yıldırım in 2016 and 2017.
2. The Transatlantic support for Turkey's role has changed based on the changes in weighted degrees of Obama in 2015-2016 and Trump later on.

With the Trump administration's come to power, the density between the nodes of Erdogan and Trump increased compared to that of the Obama administration. Network analysis captures the policy change produced by the decision of the Trump administration to take an active role, criticizing the retrenchment policies of the Obama administration. However, the increase in the density between Erdogan and Trump's nodes did not refer to a supportive but competitive role prescription for Turkey, as Turkey's military operations into northeastern Syria attracted harsh reactions from the Trump administration. Table 1 demonstrates that the weight of Bashar al-Assad's node increased in 2018 and 2019 (0.103 and 0.131, respectively) when the JDP elites adopted an interventionist attitude regarding the Syrian crisis. However, its weight seems to diminish relatively in 2020 (0.95) compared to previous figures after President Trump's letter urging Turkey not to continue its military operations in northern Syria. Transatlantic support has a downward trend, as seen in Graph 1. It can be translated as Turkey gradually losing its appeal as a model country in the ME, which we take as a significant indicator of Turkey's conflictual role performance in this period.

Graph 1: Change of President Erdogan's Weighted Degree in 2015-2020 (Source: Authors' depiction)



3. The national role conception of activism shifted towards cooperation with non-western actors which is demonstrated by the changes in Putin's weighted degrees.

There is also a concomitant rise in the density between the nodes of Erdogan and Putin. This proves that network analysis captures the shift of the JDP elites' conception of activism toward an alliance with the non-western actors when the Transatlantic systemic role prescriptions for Turkey did not satisfy Turkey's security concerns regarding the Syrian crisis.

According to modularity analyses of networks, the number of network modules is four in 2015, five in 2016, 2017, and 2018, six in 2019, and seven in 2020 (The visual graph of five modules is drawn in Figures 14, 15, 16, 17, 18, 19). Based on the clusters in the networks, we see that the algorithm successfully put nodes in different groups according to their subjects. For instance, in the 2018 network, Janal Khashoggi (red) and Priest Andrew Brunson (pink) are in different clusters. Similarly, in the 2019 network, Ekrem İmamoğlu, Binali Yıldırım, and Mehmet Özhasseki are in the same cluster (turquoise).

The findings based on the modularity analysis prove the validity of the following conceptual arguments:

1. The systemic role prescriptions for Turkey shifted by the changes emanating from the Trump administration policy in the ME. The modularity analyses of the 2015 and 2016 networks (Figures 20 and 21, respectively) demonstrate that Obama was in the same cluster (yellow) as Assad, while Erdogan was in a different one (pink). On the other hand, in the 2017 network (Figure 22), Trump and Assad were in the same cluster (yellow), while Putin was in the green one and Erdogan in the pink one.
2. These changes resulted in the relative exclusion of Turkey from collaboration with the Transatlantic Community due to a mismatch between the JDP elites' activist national role conceptions and Transatlantic systemic role prescriptions for Turkey. The 2018 network (Figure 23) demonstrates yet another shift as Erdogan was in the pink, Trump was in the yellow clusters, and Assad and Putin were in the green cluster. We interpreted these shifts as hinting about the JDP elites' conception of activism turning into a conflictual one, especially the US prescriptions. For in 2019 network (Figure 24), Mevlüt Çavuşoğlu and Assad were in the same cluster (blue), and Putin, Hulusi Akar, and Hassan Rouhani were in the same cluster (red). On the other hand, Trump, Putin, and Erdogan were in different clusters (yellow, red, and pink, respectively). The findings demonstrate that modularity analysis successfully captured the political developments of the Syrian crisis, including Turkey's beginning of military cooperation with Russia while forcing it to cease its interventionist and unilateral military operations.
3. The appeal of improving strategic alliances with non-western actors increased for the JDP elites. The mismatch between national role conceptions and systemic role prescriptions peaked when Turkey purchased the S-400 Missile system from Russia. This resulted in Turkey's suspension of the F-35 fighter jet program and the US imposition of the CAATSA sanctions. The findings based on the 2020 network (Figure 25) successfully grasp these political developments by putting Erdogan, Putin, and Assad in the pink cluster while Trump is in the yellow one. We argue that this definite shift in Turkey's strategic partnerships, as seen from the clusters in the 2020 network, means that the central positioning of the Transatlantic link in TFP is seriously undermined.

CONCLUSION

In this paper, we analyzed the JDP's ME policy between 2015 and 2020, utilizing the concept of role conflict. We empirically tested conceptual findings by using network analysis. Accordingly, our framework's advantages are two-fold. First, role conflict is used to conceptualize the JDP's ME policy by bringing together the systemic and agential dynamics of the foreign policy process. Second, exploiting the big data from the GDELT project, network analysis provides a deeper understanding of the JDP'S foreign policy role performance in the ME policy for the period of 2015-2020 by enabling the empirical testing of key dynamics in our framework – the positioning of the Transatlantic link and the conception of activism.

Our analysis showed that the JDP's national role conceptions of activism in the period of 2015–2020 were different from the Transatlantic systemic role prescriptions for Turkey after empirically testing the conceptual justifications of the role conflict concept. Nonetheless, the importance of the Transatlantic Link appears to have not changed for JDP decision-makers.

To conclude, utilizing network analysis to interpret what big data tells about international politics promises a rich yet underexplored research line and enables empirically testing the theoretical arguments. In the International Relations discipline, whereby the vitality of using computational methods grows constantly, we believe that our study signifies a stirring attempt. However, we fully accept that our empirical analysis has some gaps and weaknesses. In this context, we think that additional research using different methods and datasets, with a focus on some other countries (or leaders), can enhance this analysis.

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This article does not contain any studies with human participants performed by any authors.

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