Centrality Analysis of External Supporters of Non-State Armed Groups
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We perform a centrality analysis on UCDP's External Support Dataset. The dataset includes observations in which an actor (either a country or a rebel organization) that is involved in an armed conflict (either intrastate or interstate) receives external support from another actor. External support can come in a variety of forms including monetary support, troops, weapons, territory, infrastructure, intelligence, materials/logistics, and training/expertise. We use the dataset to create a sociomatrix that includes a count of the number of observations in which an external support relationship was formed between two actors. A network analysis is useful way to analyze the relationships present in these data because it can demonstrate which actors are most essential in supporting external conflicts and which actors are most reliant on support from other actors. Governments and other rebel organizations may be motivated to provide external support to other conflicts in order to influence the outcome of the war. Governments often also aim to do this in a covert manner, particularly if they are funneling support to a rebel group that is aiming to gain control of a state. On the supply side, the relationships underlying these actions reveal not just important foreign policy tools relied on by certain governments, but also their true policy preferences that they may be reluctant to otherwise make public. On the demand side, a plethora of external support to an actor, particularly a rebel group, is important because it demonstrates the capacity and power that an actor may have, which is important to their ability to win the conflict.

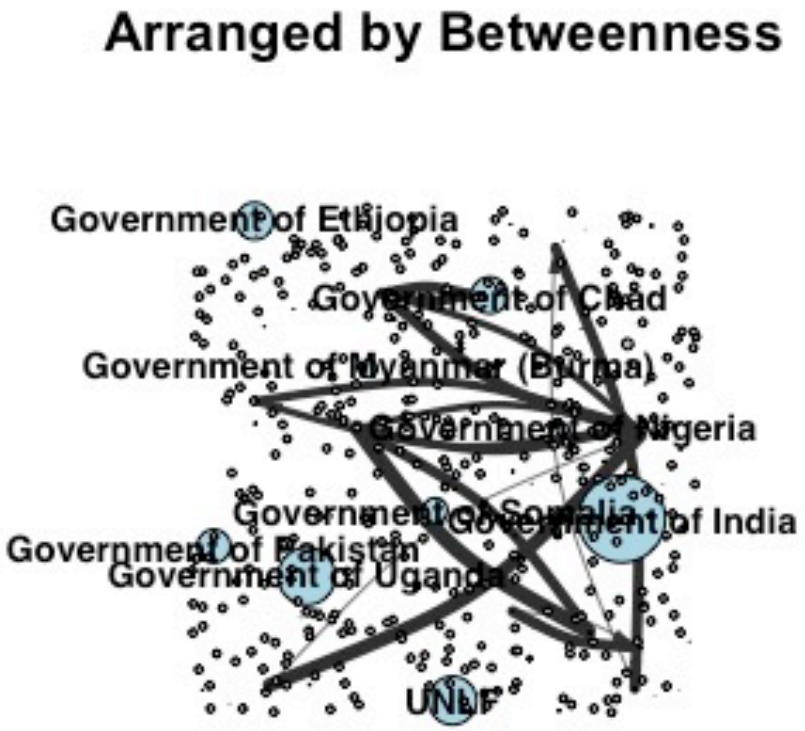
Degree Centrality: (1): Government of Chad, (2): Government of India, (3): Government of Myanmar, (4): Government of Ethiopia, (5): Government of Uganda, (6): Government of Afghanistan
Closeness: (1): Government of India, (2): DHD-BW, (3): KNF, (4): NDFB-RD, (5): PULF, (6): ABSU
Betweenness: (1): Government of India, (2): Government of Uganda, (3): UNLF, (4): Government of Ethiopia, (5): Government of Chad, (6): Government of Pakistan
Eigenvector: (1): Government of Afghanistan, (2): Taleban, (3): Hizb-i Islami-yi Afghanistan, (4): Hizb-i Islami-yi Afghanistan-Khalis faction, (5): Mahaz-i Milli-yi Islami-yi Afghanistan, (6): Jabha-yi Nijat-i Milli-yi Afghanistan

For degree, all of the top actors are governments. This is intuitive because these are the actors with the most capacity to provide external support and they likely are supplying support for a multiple of other actors/conflicts. The government of Chad has the highest degree centrality score of the group. The top actors for closeness included almost all rebel organizations, with the exception of the government of India, which had the highest closeness score. The five rebel groups that are included in the top actors all operate within India so it makes sense that these six actors are closely related to one another. The betweenness measure shows the actors that serve as bridges to other actors. Most of the top actors are governments, with the exception of one rebel group. The top government actors for betweenness are very similar to the top actors for degree centrality, which reinforces that certain countries are likely giving support to multiple different conflicts rather than funding many of the same actors over and over. Lastly, the top eigenvector actors are all actors within Afghanistan, with one being the government of Afghanistan and the others being rebel organizations. This indicates that these actors are all well connected to other

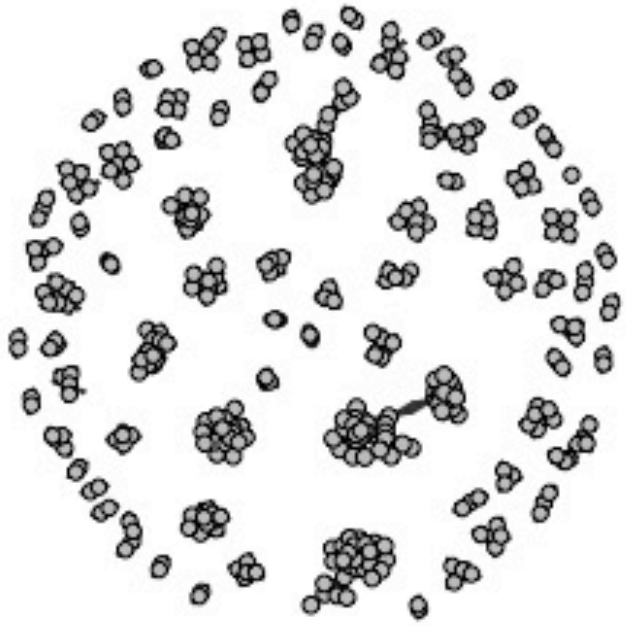
central actors within the network. Given the overall scale of international involvement in the conflict in Afghanistan, it is intuitive that many other significant actors were funneling support to these various groups, making them overall more connected to central and powerful nodes within the network.

Of the four centrality measures used in this analysis, betweenness and degree centrality are the most useful and appropriate for the data. While closeness and eigenvector centrality reveal interesting patterns regarding India and Afghanistan, they cannot tell us much about what is happening more broadly within the global system. Betweenness and degree centrality reveal which actors are most connected to external support globally. As discussed earlier, this reveals not only which actors are most likely to use external support as a foreign policy tool and who aim to covertly influence conflict outcomes but also which actors are receiving the most external support, which in turn will make them more powerful and able to win their conflicts.

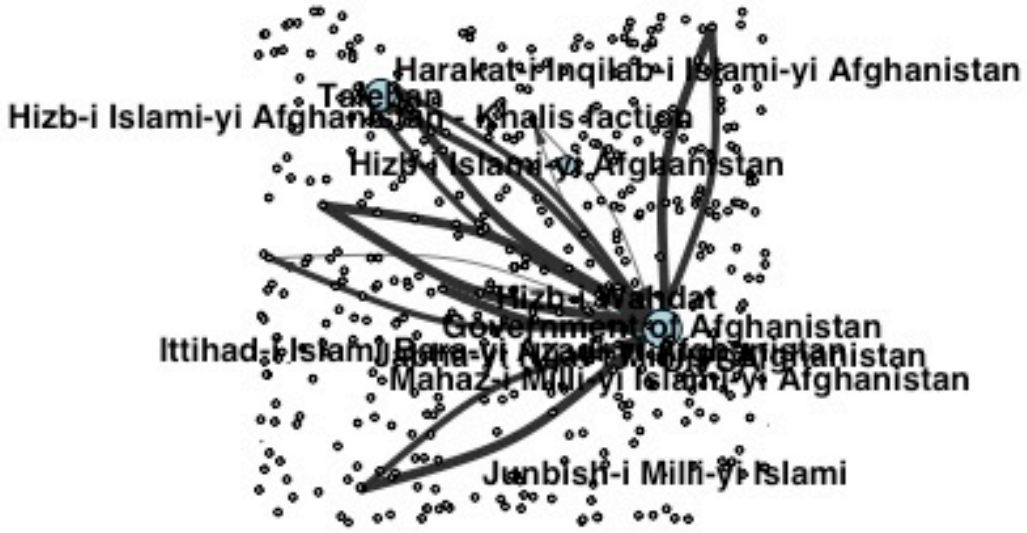
	Betweenness	Degree	Closeness	Eigenvector
1	Government of India	Government of Chad	Government of India	Government of Afghanistan
2	Government of Uganda	Government of India	DHD - BW	Taleban
3	UNLF	Government of Myanmar (Burma)	KNF	Hizb-i Islami-yi Afghanistan
4	Government of Ethiopia	Government of Ethiopia	NDFB - RD	Hizb-i Islami-yi Afghanistan - Khalis faction
5	Government of Chad	Government of Uganda	PULF	Mahaz-i Milli-yi Islami-yi Afghanistan
6	Government of Pakistan	Government of Afghanistan	ABSU	Jabha-yi Nijat-i Milli-yi Afghanistan

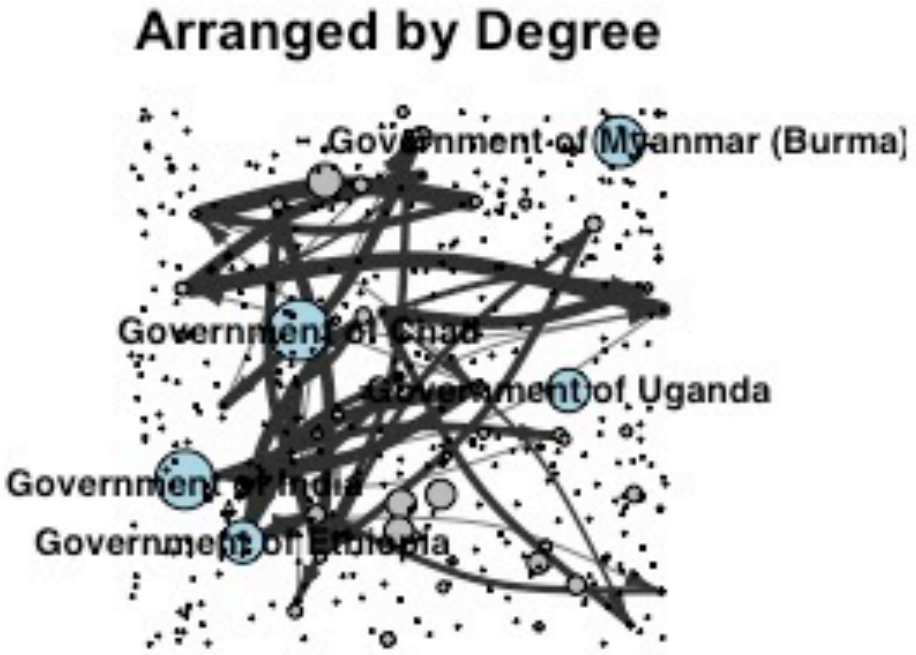


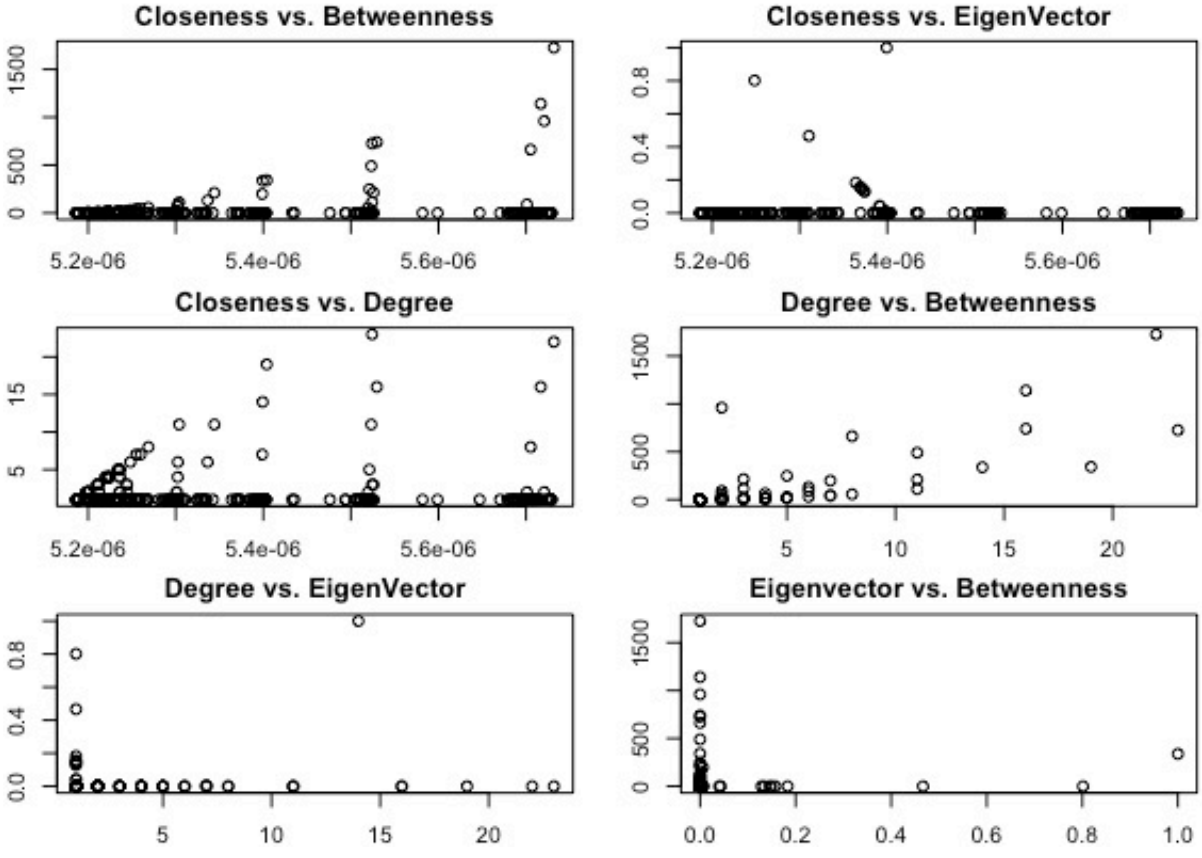
Arranged by Closeness



Arranged by Eigenvector Centrality




Arranged by Degree
Government of Myanmar (Burma)
Government of Chad
Government of Uganda
Government of India
Government of Ethiopia


Closeness vs. Betweenness
Closeness vs. EigenVector
Closeness vs. Degree
Degree vs. Betweenness
Degree vs. EigenVector
Eigenvector vs. Betweenness

	Degree	Closeness	Eigenvector	Betweenness
Degree	1.00	0.11	0.15	0.77
Closeness	0.11	1.00	0.01	0.24
Eigenvector	0.15	0.01	1.00	0.07
Betweenness	0.77	0.24	0.07	1.00