Network determinants of conflict in business organizations

It has been a commonly accepted in the area of Management studies that important variables of interest, such as productiveness, employee turnover or team conflict were viewed as functions of attributes of employees, management units (departments), or organization as a whole. However, in the past 15 years researchers started recognizing that many of these outcome variables are largely shaped by informal structure of an organization, or, its social network. As coined by Rob Cross, organizational network analysis (ONA) is an X-ray into the actual processes evolving in the organization (Cross et al., 2001). ONA can serve as a tool for HR management in many ways. It can be used to effectively plan, implement and evaluate changes (Arena et al.,2017; Borgatti et al., 2002; Green at al 2017; Hollenback et al., 2015); facilitate knowledge sharing and innovation (Cross et al., 2017; Hollenbeck et al., 2015; Zheng et al., 2016); improve organizational structure (Borgatti et al., 2002; Cross et al., 2002; Hollenback et al., 2015; Oh et al., 2004; Zheng et al., 2016); serve as a tool for hiring and adaption of new employees (Hollenbeck et al., 2015); measure and improve employees' performance (Arena et al., 2017; Hollenbeck et al., 2015; Zheng et al., 2016); build a meaningful and subjectively honest compensation policy (Hollenbeck et al., 2015); increase team viability through diagnosing and managing conflicts (Balkundi et al., 2009), etc.

In this research we focus on investigation of network predictors of personal and group-level conflict in an organization. A nice example of such predictor is employee centrality. In Balkundi et al., 2009 the researchers show that unlike it is usually hypothesized, implications of high centrality of a leader are not necessarily positive. On the one hand, high indegree centrality of a leader in advice network has shown to be associated with lower conflict levels and higher team viability within the corresponding department. On the other hand, high betweenness centrality of a leader in the same network was associated with higher conflict and lower viability.

In this paper we use longitudinal data on one international industrial organization, operating in Belarus, Poland and Russia. These data were collected on June, 2015, December, 2017 and December, 2018 via online questionnaire, which was filled by employees of the group of companies. The survey contained questions about employees' working interactions, including among others, reporting relationships, asking for advice, and favorable attitudes ("will recommend to work with this worker"). Of special interest for this study is the network of conflict relationships. A relationship is defined as 'conflict' whenever one employee indicated that he/she "has had to turn to a third party for help or mediation" to resolve difficulty with another employee. Conflict relations may be mutual or one-sided. The resulting networks are middle size (825 employees in 2015 and 754 employees in 2017) multi-relational directed graphs, weighted by intensity (frequency) of working contacts. The data available also include formal organizational structure, employee position, department affiliation and company seniority, some demographics (sex, age) and position grade level (a measure of the role played by a worker in an organization).

We use these data to test the following hypotheses about network factors of organizational conflict on individual (H1 and H2) as well as on department level (H3 and H4):

H1. Asymmetric perception of organizational roles is indicative of potential conflict. We will test whether non-mutual nominations in the subordination network are associated with the conflict between the corresponding employee and his boss.

H2. Organizational structures allowing duplicate subordination are more prone to conflict. We will test whether subordination of an employee to several bosses creates background for conflicts and to which extent soft skills and managerial competences of involved leaders can prevent it.

H3. Managerial skills and competences of leaders are predictive of (1) intra- and (2) intergroup conflict of involved departments.

H4. There are attributes of a broker between two organizational entities associated with conflict between them. Brokerage position is defined as having high betweenness centrality in the network of interactions between the two departments.,

To test the presented set of hypotheses we will use Exponential Random Graph Model (ERGM) on the 'conflict' relationships network. Using this model, we will see which of the hypothesized predictors are associated with higher chance of conflict relations between the corresponding organizational actors (as compared to random graph). We will also apply Structural Equations Model (SEM) on a set of available variables for exploratory purposes, to deeper understand the relations between the constructs in place.

References

1. Arena, M., Cross, R., Sims, J., & Uhl-Bien, M. (2017). How to catalyze innovation in your organisation. MIT Sloan, Management Review, Magazine, Summer.
2. Borgatti, S., & Molina, J. L. (2002, August). What can social network analysis do for management consulting. In Building Effective Networks Conference, Academy of Management.
3. Cross, R., Arena, M., Sims, J., & Uhl-Bien, M. (2017). How to Catalyze Innovation in Your Organization. MIT Sloan Management Review, 58(4), 39.
4. Cross, R., Borgatti, S. P., & Parker, A. (2002). Making invisible work visible: Using social network analysis to support strategic collaboration. California management review, 44(2), 25-46.
5. Cross, R., Parker, A., Prusak, L., & Borgatti, S. P. (2001). Knowing what we know:: Supporting knowledge creation and sharing in social networks. Organizational dynamics, 30(2), 100-120.
6. Green, D., & Green, D. (2017). The best practices to excel at people analytics. Journal of Organizational Effectiveness: People and Performance, 4(2), 137-144.
7. Hollenbeck, J. R., & Jamieson, B. B. (2015). Human capital, social capital, and social network analysis: Implications for strategic human resource management. The Academy of Management Perspectives, 29(3), 370-385.

8. Oh, H., Chung, M. H., & Labianca, G. (2004). Group social capital and group effectiveness: The role of informal socializing ties. Academy of management journal, 47(6), 860-875.

9. Zheng, X., Le, Y., Chan, A. P., Hu, Y., & Li, Y. (2016). Review of the application of social network analysis (SNA) in construction project management research. International Journal of Project Management, 34(7), 1214-1225.