

Does Social Media Promote Protests?

Ruben Enikolopov, CEFIR
November 2015

Despite a lot of speculations about the role of social media in recent political protests throughout the world, there is still no persuasive empirical evidence to support these claims. We fill this gap by providing evidence that social media indeed played an important role in promoting political protests in Russia in 2011-2012. Using data on the dominant Russian online social network, VKontakte, we show that higher penetration of the social network across cities increased the likelihood of protest occurrence and the number of participants in these protests. Additional evidence suggests that reducing the costs of coordination is a mechanism behind social media influence.

The emergence of online social media, such as Facebook and Twitter, allows users to connect and communicate directly, and thus, potentially reduces the costs of coordination and promotes collective action. The works of Acemoglu, Hassan, and Tahouc (2015) as well as Steinert-Threlkeld et al. (2015) provide evidence that activity on Twitter predicts protests in Arab countries. However, so far there has been no systematic evidence on whether increased penetration of social media actually improves people's ability to overcome collective action problems.

In Enikolopov, Makarin, and Petrova (2015) we study these effects by looking at a specific type of collective action – political protests – and providing evidence that an increased penetration of the most popular online social network in Russia VK (aka *VKontakte*) indeed had a positive effect on political protests in Russia in 2011-2012.

Social media can have an impact on protests by providing an information channel, coordination channel, and social pressure channel. The information channel reflects the fact that online social media can serve as an important source of information, both about

the fundamental issues that cause protests (e.g. electoral fraud) and about the protests themselves. This channel can be especially strong in countries with government-controlled traditional media, like Russia. At the same time, both the coordination channel and social pressure channel rely on the fact that users not only consume, but also produce information. In particular, social media not only allows users to coordinate the logistics of the protests (coordination channel), but also introduces social motivation if users' friends openly announce that they are joining the protest (social pressure channel). Additional results in Enikolopov, Makarin, and Petrova (2015) indicate that reducing the costs of coordination is a mechanism behind the effect of VK on political protests.

Method

Estimating the causal impact of social media is methodologically challenging, as social media usage is endogenous to individual and community characteristics. The mere fact that penetration of social media is correlated with political protests can just reflect the fact that people who more likely to open accounts in social media (e.g. more educated people) are

also more likely to participate in political protests.

To overcome the endogeneity problem, we exploit particularities of the early-stage development of particularities of the early-stage development of VK. Most of the early users of the network were classmates of the founder of VK – Pavel Durov – from the Saint Petersburg State University (SPbSU). At the same time, friends from the hometowns of these early users were also more likely to open VK accounts. The penetration of VK was therefore higher in cities, from which the students who studied together with Durov come from.

We use this feature to identify the effect of VK penetration on political protests. Formally, we use the origin of the students who studied at the SPbSU in the same five-year cohort as the VK founder as an instrument for VK penetration across different cities in 2011, controlling for the origin of students who studied at SPbSU in older and younger cohorts, as well as a range of socio-demographic characteristics. Essentially, we compare cities that are similar in terms of their observable characteristics (e.g. average wage, share of people with higher education, internet penetration, the average number of students going to SPbSU etc.), but which differ in VK penetration just because some cities happen to have someone from there studying with Durov and some did not.

Data and Results

For our analysis, we collect data on political protests in large and medium size cities in Russia between December 2011 and May 2012 using reports in mass media. Among 626 cities in our sample, 133 witnessed at least one protest demonstration during this period.

We also collect information on the number of VK users in each city as of November 2011 using information provided by VK. We also collect information on the origin of students

who studied at SPbSU and socio-demographic characteristics of the cities from a variety of sources.

The results indicate that higher VK penetration had a positive effect on both the probability of having a protest in a city and the number of people participating in protests. The magnitude of the effects implies that a 10% increase in VK penetration increases the probability of a protest by 3.7%, and the size of a protest by 15%.

We perform a number of additional tests to ensure that our results are not driven by unobserved heterogeneity. In particular, we show that VK penetration was not correlated with protest activity or voting behaviour before the emergence of social media.

To provide evidence on the mechanisms behind the effect we first look at the effect of fractionalization of network users between VK and Facebook. If the effect is driven by the information that is provided through social networks, it should not matter in which particular social network people have an account. However, for coordination and peer-pressure mechanisms it is important that people are in the same online social network. Thus, we can tell these mechanisms apart by comparing cities that have a similar number of users of either VK and Facebook, but differ in the way they are split between the two networks. The results indicate that political participation was lower in places where the split was higher, consistent with the coordination and peer-pressure mechanisms. In addition, we show that the effect of network penetration on protest participation became smaller over time, which is consistent with both the information and coordination channels. Taken together, these additional results point to the coordination mechanisms being at work.

Conclusion

Overall, the results in Enikolopov, Makarin, and Petrova (2015) indicate that social media penetration facilitates participation in political protests. The results also suggest that lowering the coordination costs is the mechanism through which social media promotes this form of collective action. This effect has been predicted by the theoretical literature (e.g. Edmond 2013, Little 2015) and widely discussed in the popular press, but our paper is the first to provide systematic empirical evidence to support this prediction.

The finding that social media promotes political protests by facilitating coordination suggests that similar effects can be expected for other forms of collective action. Thus, the growing penetration of social media is likely to have a positive effect on a wide range of activities from participation in local community activities and volunteering to crowd-funding projects.

▪

References

- Acemoglu, D., T. Hassan, and A. Tahoun (2015) “The Power of the Street: Evidence from Egypt’s Arab Spring,” *Working paper*.
- Edmond, C. (2013) “Information manipulation, coordination, and regime change,” *Review of Economic Studies*, 80(4): 1422–1458.
- Enikolopov, R., A., Makarin, and M. Petrova (2015) “Social Media and Protest Participation: Evidence from Russia”, *Working paper*.
- Little, Andrew (2015) “Communication Technology and Protest,” *Working paper*.
- Steinert-Threlkeld, Z., D. Mocanu, A. Vespignani and J. Fowler (2015) “Online social networks and offline protest,” *EPJ Data Science*, 4(19).

Ruben Enikolopov

New Economic School (NES),
Center for Financial and
Economic Research (CEFIR),
Barcelona Institute of
Political Economy and Governance
Universitat Pompeu Fabra



Renikolopov@nes.ru

<https://sites.google.com/site/rubenenikolopov/>

Ruben Enikolopov is an ICREA Research Professor at Barcelona Institute of Political Economy and Governance, UPF, and Associate Professor of economics at the New Economic School, Moscow. He received his PhD in Harvard University in 2008.

Ruben has published his research in leading academic journals such as *American Economic Review*, *Quarterly Journal of Economics*, *Proceedings of National Academy of Science*, *American Political Science Review*, *American Economic Journal: Applied Economics*, *Journal of Public Economics*.

His research interests include political economy, economics of mass media, and development economics.