Understanding Chinese Border Incursions Into India

Many of China’s neighbors have been the subject of Chinese military incursions – both on land as well as maritime borders. Researchers now at the Northwestern Security & AI Lab have led efforts to shed light on two questions: when does China engage in border incursions into India? And where?

Understanding the answers to these questions is important for many reasons. First, Indian military officials will be able to better the use of real-time surveillance assets and military deployments along the shared border with China. Second, they will be able to take the necessary political actions either on a bilateral basis or via international organizations such as the UN to defuse the potential for conflict.

Analyzing When Incursions Will Occur

Our multidisciplinary team has developed a novel monthly dataset consisting of 15 years (2005-2019) of data about Chinese incursions into India. This data, organized at a monthly level, captures 18 independent variables that are based on theories about border conflict. It also included data about every single incursion that occurred during this 15-year period.

We conducted an exhaustive multivariate statistical analysis of this data and discovered that the likelihood of Chinese border incursions into India goes up dramatically (in the coming 6 months) when any one of the following conditions is true:

(i) the Chinese economy is weak as reflected in consumer confidence numbers for China,
(ii) the Chinese leader is in early stages of his tenure,
(iii) the Indian leader is in later stages of his tenure,
(iv) there is hostility between India and Pakistan,
(v) there are upcoming elections in India
(vi) there is growing friendship between India and the US.

Of course, most incursions happen in the summer and relatively few in the winter. These findings highlight the need for vigilance on the Indian side when any of these conditions is true.

Analyzing Where Incursions will Occur

We also conducted a study with data from 2005-2020 on where Chinese border incursions are likely to happen. Figure 2 below shows a heat map of the situation.

We can divide the China-India border into two broad sectors: the Western Sector comprising the Aksai Chin and the Middle/Eastern Sector from Sikkim/Bhutan to Arunachal Pradesh. The results of our study show that incursions in the Western Sector are statistically independent of incursions in the Middle/Eastern sector.
This suggests that we can think of the China-India border conflict as two independent conflicts. This could be due, in part, to the fact that the People’s Liberation Army had two separate commands managing these sectors till recently.

The Chinese incursions in both the western and the eastern sector target a few red-zones at a time. In the western sector we can model the incursions by a Blotto game and our data matches the randomized allocation which is optimal in such a game. The incursions are clustered in time and space, but average out over time. This indicates that there is an ongoing competition for control of all the red-zones, in which the PLA has constructed semi-permanent fortifications. This may, however, not be a sign of strength as the strategy of the PLA is similar to that of a weaker player in a Blotto game.

Impact

Our work on Chinese border incursions into India has been featured extensively in the press including The Times of India, The Telegraph, Nach Welt, Money Control, Rediff, The Print, The Pioneer, amongst others.

Additional Information
https://sites.northwestern.edu/nsail/projects/chin/

References