

India Inequality Report

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Executive Summary

Data

Three datasets on wealth and status distribution in India were analyzed: 2016 World Bank quintile and decile estimates of income, and 2015-2016 USAID DHS (Demographic Health Survey) data on wealth factor score and agricultural land ownership.

Results

India is moderately risk acceptant across all datasets.

Significance for Risk Taking and Stability

Despite the risk-acceptant nature of India's population, it is a stable democratic country that seeks to forge an independent path to become an emerging global power. However, given this latent risk-acceptant propensity and the soaring levels of economic inequality, some sort of catalyst has the potential to deteriorate national unity along a multitude of societal divisions.

Implications for US Interests

India is a vital strategic partner not only in South Asia but globally, and increasingly more so in the age of great power competition. Encouraging and maintaining India's political stability and democratic institutions is important in buffering against Chinese influence, and the decay of national socio-political unity has the potential to deteriorate US-Indian relations.

Implications for China's Interests

China is poised to take advantage of any political instability and unrest inspired by India's social cleavages and inequality. However, this is only true to the extent that it will distract New Delhi from competing with China.

Implications for Russia's Interests

Russia is far more ambivalent to India than the US or China and seeks to maintain their security/energy cooperation with New Delhi while simultaneously diminishing US hegemony in the region.

Table of Contents

Executive Summary	1
Introduction.....	3
Why India?.....	3
Great Power Interests in India.....	3
Literature Review on Inequality in India.....	4
Country-Level Measures of Inequality in India.....	5
Prognosis for Change to 2029	7
Empirical Data on Inequality in India	8
<i>Dataset 1: 2016 India World Bank Quintile Data</i>	<i>8</i>
<i>Dataset 2: USAID DHS 2015-16 India Wealth Factor Score</i>	<i>9</i>
<i>Dataset 3: USAID DHS 2015-16 India Agricultural Land Ownership.....</i>	<i>10</i>
Findings on Inequality in India	11
References.....	12

Introduction

This is a summary report on inequality in India compiled as part of the Aggrieved Populations project conducted in support of the 2019 Strategic Multilayer Assessment (SMA) Future of Great Power Competition and Conflict project conducted for the JS-J39.

This report provides background on why the country was chosen, relevant historical background, literature review concerning inequality in the country, synopses of empirical data sources and analyses, and a concluding section that summarizes the findings. It is not intended to provide a comprehensive analysis of inequality and grievance in the country, but to place the empirical analyses conducted on this country in their social and political context and to highlight interesting cases of inequality pertinent to risk acceptance and great power competition. The analyses focus on the measurement of population risk sensitivity as a function of measured inequality using the Arrow-Pratt measure of risk aversion, whose positive values indicate risk aversion and negative values indicate risk acceptance. Studies have shown that risk acceptance is associated with social unrest, terrorism, and other forms of social disruption (Kuznar 2007; 2019). The full explanation of the underlying method and theory is presented in the summary report, *Inequality, Risk Sensitivity and Grievance in Context: Summary of Aggrieved Populations Country Reports*, submitted as part of this SMA project. This report is intended to be supporting material to that report and presumes familiarity with it.

In order to create an inclusive and more representative set of countries, an effort was made to analyze countries from each major region of the world (Africa, Central Asia, East Asia, Europe, Latin America, the Middle East, North America, South Asia).

Why India?

India was chosen for four reasons: 1) It is a South Asian country, 2) it is the world's largest democracy, 3) it is intimately integrated with the US economy, and 4) both China and Russia are seeking influence in the country and region.

Great Power Interests in India

India is the world's second-most populous country, possesses the world's largest economy in terms of purchasing parity, and is a critical powerhouse in the global economy (World Bank, 2019). It is also a nuclear power that is embroiled in contentious territorial disputes with both Pakistan and China. Furthermore, India is an incredibly diverse country with dozens of languages, religions, and ethnicities that are undergoing significant economic and socio-political change. In terms of foreign policy, India is seeking to elevate its integration into the global economy while maintaining strategic autonomy, although this is increasingly more difficult in the era of great power competition (Stratfor, 2019).

The US has enjoyed friendly relations in India since its 1947 independence from the UK, and US-Indian relations have improved further since the collapse of the Soviet Union¹. As both nations share common values in democracy and "economic prosperity through trade, investment, and connectivity" (US Department of State, 2019), the US encourages India's emerging power status. Such support also serves to buffer China's growing power and to empower India to not rely on Russian military-technical

¹ As a member of the Non-Aligned Movement, India enjoyed neutrality through most of the Cold War, and has historically exhibited ambivalence towards great powers.

cooperation. Bilaterally, India and the US have a significant trade relationship in which India has radically increased its imports of US crude oil. Moreover, such trade is likely to increase under the Modi government which has emphasized the importance of Indo-US relations (Tellis, 2018).

China and India are clear competitors in numerous dimensions, economically, militarily, and politically. Beijing envisions the rise of India as a threat to China's national security; for example, Beijing fears "that India's military modernization is principally driven by its quest for offensive great-power competition with China" (O'Donnell, 2018). Despite many areas of competition and even contentious territorial disputes, China and India also share many areas of cooperation with dozens of strategic cooperation agreements and memoranda being signed in the past years in multiple sectors, such as "commerce and trade, railways, space cooperation, pharmaceuticals, audio-visual coproduction, culture, establishment of industrial parks, [and] sister-city arrangements" (Ministry of External Affairs of India, 2017). As India and China are both members of the Shanghai Cooperation Council, India will engage in tacit cooperation with China, but at the same time will still compete against the threat of China's hegemonic ambitions in the region.

Russia has enjoyed amicable relations with India dating back to the Cold War, and since the collapse of the Soviet Union, this dynamic has largely continued. As with most other countries, Russia is unable to compete with the political and economic influence of the United States and China, but has been able to secure its role as the "largest defense partner"² and a strong proponent of India's civil nuclear energy sector (Godbole, 2018). Both countries also share a similar multi-polar worldview where their power status falls under US and Chinese shadows; however, great power competition has made such friendly relations more complex. Russia's antagonistic relationship with India's strategic ally the US, as well Moscow's "growing relationships" with China and Pakistan, strain Indo-Russian relations and prevent further mutual political and diplomatic support (Godbole, 2018).

Literature Review on Inequality in India

Inequality in India has a unique history where it was socio-religiously institutionalized through the Caste system for thousands of years. While the Caste system was constitutionally abolished in 1950, there has been a persistent and well-studied legacy of the institution that has been difficult for New Delhi to remove by fiat in India's modern history. In modernity, economic inequality has plagued India despite decades of consistent and sometimes rapid economic development, and it remains a pressing socio-economic issue for New Delhi and the Modi administration. Gini measures of income inequality score India as moderately unequal, and roughly on par with the US, the UK, and many other developing nations in the world, with a concentration of wealth in the highest levels of society. Oxfam International (2017) lists several points illustrating aspects of economic inequality in India that are not unlike the US:³

- "The top 10% of the Indian population holds 77% of the total national wealth. 73% of the wealth generated in 2017 went to the richest 1%, while 67 million Indians who comprise the poorest half of the population saw only a 1% increase in their wealth."
- "Billionaires' fortunes increased by almost 10 times over a decade and their total wealth is higher than the entire Union budget of India for the fiscal year 2018-19, which was at INR 24422 billion."

² Where Russia supplies 60% of India's "imported military equipment by value" (Godbole, 2018).

³ Decambre (2019) writes that "the richest 10% of U.S. households representing 70% of all U.S. wealth in 2018, compared with 60% in 1989," thus being very similar to India. This concentration of wealth in the top 1% in India is in fact "second to the United States among the major countries for which the data is available" (Himanshu, 2018).

- “Many ordinary Indians are not able to access the health care they need. 63 million of them are pushed into poverty because of healthcare costs every year.”

The Gini of net wealth paints a more severe level of Indian inequality however, where India is among the most unequal countries in the world with a Gini of 0.83.⁴

Inequality has not improved as India’s economy has grown and modernized, the wealthiest sectors of Indian society have disproportionately accounted for economic growth through 1980-2015: “the top 0.1% of earners captured a higher share of total growth than the bottom 50% (12% vs. 11%), while the top 1% received a higher share of total growth than the middle 40% (29% vs. 23%)” (Chancel & Piketty, 2017). There is also persistent large urban-rural income inequality that is higher than other comparable, large developing countries (Munshi, 2017). Land ownership is similarly unequally apportioned as seen in the table below (Bharti, 2018):

Percentage of Land Area Ownership									
	Bottom 50 %			Middle 40%			Top 10%		
Year	1991	2002	2012	1991	2002	2012	1991	2002	2012
India	4.10	4.01	3.84	45.83	41.33	35.88	52.18	53.01	54.48
Rural	6.68	6.76	6.79	44.98	44.47	43.78	48.34	48.76	49.43
Urban	0.86	1.77	1.36	16.05	11.27	20.96	83.09	86.96	77.68
Percentage of Land Value Ownership									
	Bottom 50%			Middle 40%			Top 10%		
Year	1991	2002	2012	1991	2002	2012	1991	2002	2012
India	21.67	24.80	28.83	43.72	42.99	41.67	32.50	33.88	35.30
Rural	15.01	15.92	17.85	51.12	48.47	44.00	33.87	35.61	38.14
Urban	27.53	30.80	23.02	45.13	39.39	42.66	27.35	29.81	34.32

Source: Author’s calculation using NSS AIDIS datasets. Design weights are used to estimate these values. The deciles are based on land area.

There are extensive arguments that the Caste system still plays an important role in preserving and encouraging socio-economic inequality in India⁵, despite decades of extensive and litigious government reforms designed to mitigate the legacy of Caste. Bharti singles out the poor educational outcomes in lower-Caste communities as likely “the most worrying aspect for any Indian policy-makers,” and Munshi cites that systems such as “Caste-based insurance networks” create distortions in labor markets and limit social mobility.

Country-Level Measures of Inequality in India

India was initially assessed with a collection of country-level metrics. These metrics provide measures of the country’s inequality compared to other nations, inequality within the country, social conditions that may be consequences of that inequality, and the prognosis for stability in the future (**Error! Reference source not found.**).

⁴ For more information on common misconceptions of Indian inequality, as well as a critique of current literature and measures on Indian inequality, see (Himanshu, 2018).

⁵ See (Bharti, 2018) and (Munshi, 2017).

While the Indian economy is the 6th largest in the world by GDP (and the fastest growing trillion-dollar economy (Silver, 2019)), it is also extremely populous and thereby a very poor country with a GDP per capita of \$1,976 USD, ranking it in the bottom quartile of countries. Comparable to Honduras and Pakistan, India's unemployment rate (consistent between 3-4% in the past 10 years) is very low, indicating that most of the population is not idle. India's informal economy is also extremely high, where 88.2 % of the employed population is informally employed. This informal economy can be explained by the very low rate of urbanization in India, which is very low even compared to other developing economies, including bordering countries like Pakistan and Bangladesh (Bharti, 2018). The share of informal workers in India has also consistently been a staggering 92%-94% of total workers from 2004-2012 (Himanshu, 2018). India's revenue from tax as a ratio of GDP is very low (2%), similar to China (1%) but lower than Russia & Brazil (4%) and OECD countries (9%) (Chancel & Piketty, 2017); indicating once more the robustness of India's informal economy. Interestingly, urban inequality has been "the major driver of rising inequality in India," suggesting improving urbanization rates will not necessarily decrease inequality in India (Himanshu, 2018).

Measures of India's state stability are relatively average reflecting a stable democratic system. A very notable exception to India's overall political stability is its Terrorism Index score where India is ranked 7th worldwide, denoting a high degree of ethnic and religious tensions across the diverse population.

Table 1. India: Basic Statistics on Inequality

Measure	Value	Rank	Source
Inequality Compared to Other Nations			
Per Capita GDP 2018	\$1976	140 of 187	WB
Country Measures of Inequality			
Inequality-adjusted Human Development Index (IHDI) 2018	0.468	101 of 151	UN
Gini Coefficient	36.8%	100 of 184	WB
Informal Employment as % of Total Employment	88.2%	24 of 112	ILO
Measures of State Instability			
Fragile States Index	76.3	71 of 175	FFP
Terrorism Index	7.568	7 of 160	IEP
Probability of Mass Killing	0.036	16 of 161	EWP
Risk Sensitivity			
Average Arrow-Pratt Measure	-4.08	53 of 158	This Study
<p>*EWP – Early Warning Project, FFP – Fund for Peace, IEP – Institute for Economics and Peace, ILO – International Labor Organization, UN – United Nations, WB – World Bank</p> <p>-The Inequality-adjusted Human Development Index (IHDI) is a UN measure of well-being and is a scale based on per capita GDP, life expectancy and education levels of the population.</p> <p>- The Fragile States Index is based on twelve conflict risk that include security apparatus, factionalized elites, group grievance, economy, economic inequality, human flight and brain drain, public services, state legitimacy, human rights and rule of law, demographic pressure, refugees and IDPs, and external interventions. The potential range of the index is zero (no fragility to 120 total fragility).</p> <p>- The Terrorism Index scores each country on a scale from 0 to 10; where 0 represents no impact from terrorism and 10 represents the highest measurable impact of terrorism.</p>			

Prognosis for Change to 2029

Narendra Modi recently won an overwhelming electoral mandate in May 2019 to secure a second 5-year term of office. Modi's Bharatiya Janata Party (BJP) led the national democratic alliance (NDA, the ruling coalition) to a broad victory in the lower house of parliament (the Lok Sabha), securing 353 seats out of 542, thus expressing a strong vote of confidence in the Modi's leadership in election that saw a whopping 67% voter turnout in the world's largest democratic elections (Bouton, 2019). In this election cycle, Modi campaigned on an economic agenda centered on addressing economic inequality and promoting redistribution of wealth and welfare practices. Examples include an "income support program for small farmers" that will directly pay \$10.6 billion USD in cash in the lead up to the election, a monumental \$1.44 trillion USD infrastructure program, as well as middle class tax cuts (Parija & Prahdan, 2019). Such plans are likely overly ambitious and politically timed to secure the support of the electorate, but the question remains as to what Modi and the BJP can accomplish in the next five years with the Indian economy.

The Indian economic outlook is largely positive in early 2019, with growth a very healthy 7.3% and an economy that has been absorbing global financial disruptions and regional political strife (Aggarwal & Chakravarty, 2019). Continual and uninterrupted growth is key to both India's stability and Islamabad's ambitions to forge an independent strategy with respect to great power competition. The Modi government is also aware of the issues of domestic economic inequality and will likely have to enact redistributive fiscal policies to support the populist reforms on which he campaigned. Such practices will likely hamper overall economic growth in India and may impact New Delhi's broader geo-political strategy.

Empirical Data on Inequality in India

Dataset 1: 2016 India World Bank Quintile Data

The World Bank provides data on lowest and highest decile, and quintiles of percentage of income or consumption.⁶ These data are used to calculate their Gini coefficients. While not exactly measuring the actual income, the percentage of overall income provides an approximation. The Indian data were gathered in 2015. **Error! Reference source not found.** presents the original data and the fitted distribution curve from which the Arrow-Pratt risk sensitivity measures will be derived, as well as the Arrow-Pratt measures of risk sensitivity.

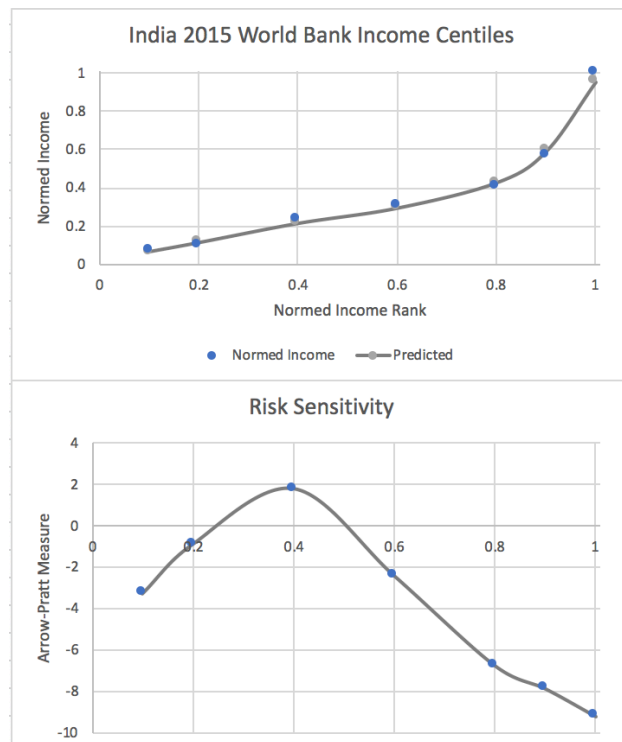


Figure 1: Distribution of Income, World Bank Quintiles India 2016 and associated Risk Sensitivity.

Summary Dataset 1: Risk Sensitivity with Respect to WB Income Centiles

The risk sensitivity data paints a picture of a risk acceptant population. The average Arrow-Pratt measure of risk sensitivity is -4.08 with respect to these data, which is slightly above the average of -4.64 for all countries and ranks it in the 50th percentile of risk sensitivity (**Error! Reference source not found.**). India's middle brackets of wealth are risk averse to a degree that is quite common in such wealth factor curves, but interestingly, the poorest sectors of Indian society are less risk acceptant than the national average. Ascending the social ladder, the wealthiest brackets of the Indian population are extremely risk acceptant, with Arrow-Pratt scores double the poorest sector.

⁶ Data drawn from: <http://wdi.worldbank.org/table/1.3>

Dataset 2: USAID DHS 2015-16 India Wealth Factor Score⁷

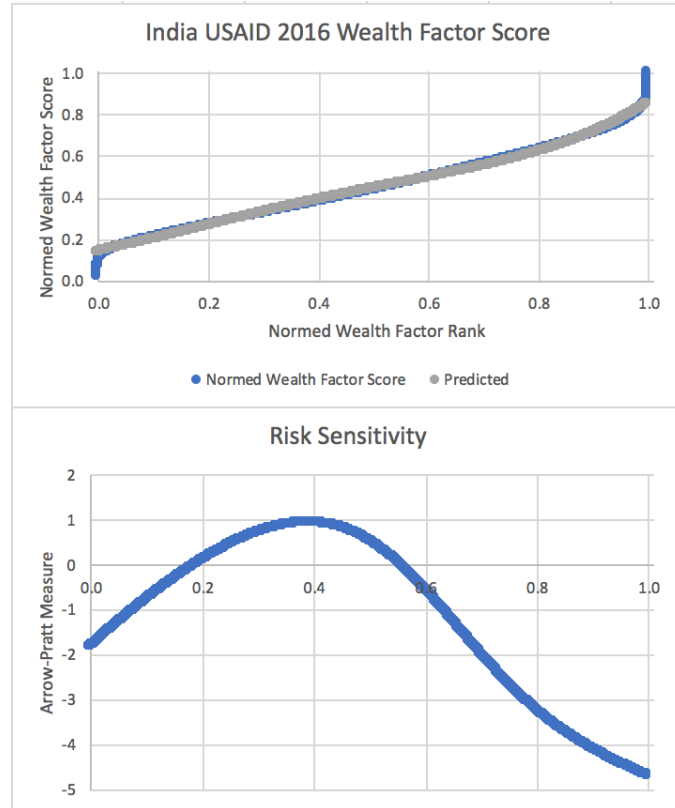


Figure 2. India 2015-16 Wealth Factor Score and associated Risk Sensitivity

Summary Dataset 2: USAID DHS 2015-16 India Wealth Factor Score

Measuring 601,509 households' statuses based on material indicators were accounted for to present a slightly risk acceptant population with a mean AP score of -1.15. Curiously, the Arrow-Pratt measure mimics the data from the World Bank income data in variance and in the shape of the curve, demonstrating a risk-adverse middle class, slightly risk acceptant among the poorest sector of society, and much more risk adverse wealthy sectors of society. Like the World Bank dataset, the wealthiest households are nearly twice as risk acceptant as the poorest, risk acceptant households.

⁷ Wealth Factor Score is an alternative approach of measuring socioeconomic status. Instead of using income, education or occupation as a measure of status, a household's status is measured by assets such as home construction material, house size, appliances, vehicles, agricultural land, and services such as domestic servants, water availability and electricity. A full description of the approach and its methodology is found in Rutstein and Johnson (2004) <https://dhsprogram.com/pubs/pdf/cr6/cr6.pdf>

Dataset 3: USAID DHS 2015-16 India Agricultural Land Ownership

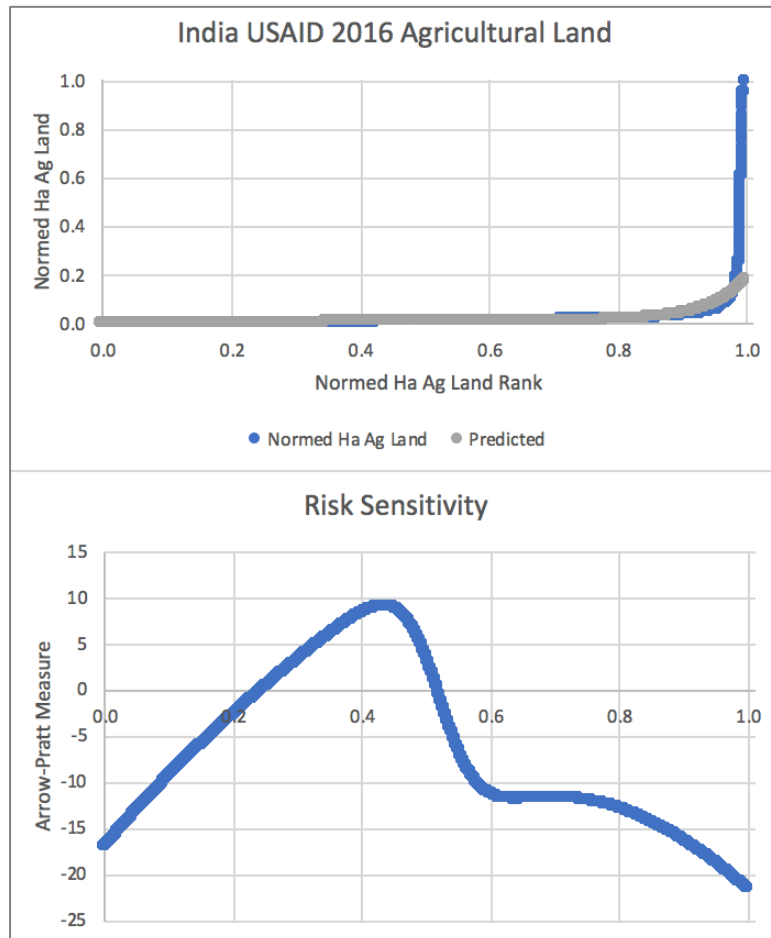


Figure 3. India 2015-16 Distribution of Agricultural Land (ha) and associated Risk Sensitivity

Summary Dataset 3: USAID DHS 2015-16 India Agricultural Land Ownership

As the distribution of land is significant driver of inequality in India, this 2016 distribution dataset highlights interesting cleavages in Indian society. Unsurprisingly, the mean Arrow-Pratt score is -6.79 meaning that the population on average is very risk acceptant, with the middle-class bracket being highly risk adverse. The upper middle bracket of agricultural land ownership remains as risk acceptant as the poorest quintile, however this is based on an underestimation of the wealthiest agricultural landowners as it does not correspond with the dramatic increase in land ownership (indicated in blue).

Findings on Inequality in India

Relevance to Instability and Social Cleavages

There is an extreme concentration of wealth in the wealthiest 1% of Indian society that is pervasive across the most meaningful division and social cleavages. Furthermore, distribution of land area ownership and land wealth value is the most extreme metric of inequality in India. These are structural issues that compound with the large informal economy, and further contribute to the cycle of inequality in India. Despite rapid economic development, inequality has only increased and will likely remain as long as growth is favored by New Delhi. Remnants of the Caste system also hamper the natural process of alleviating economic inequality (such as socio-economic mobility), despite litigation and other government initiatives.

While the picture of economic inequality is rather bleak, and unlikely to significantly alter in the short- to medium-term, India remains remarkably stable and politically viable. This is even more surprising given the vast diversity and ethno-religious divides in the second-most populous country on Earth. India is able to maintain national unity and the rule of law and will likely become an increasingly relevant regional power on the global stage.

Opportunities and Pitfalls for the US and Adversaries

Continued US support of India's democratic institutions and norms further strengthen India's independence from creeping Chinese and Russian influence. The inability of these democratic institutions and practices to address social cleavages and crises of inequality would be detrimental to the Western worldview and embolden Chinese and Russian narratives and worldview. The Modi administration values its strategic relationship with the US, but must also execute an independent foreign policy that may be at odds with the Trump administration, notably the recent trade and tariff war "which stands to advantage Russia and China" (Rajagopalan, 2019). Such policies that can hurt Modi's economic policies and therefore exacerbate issues of inequality and social cleavages, may strengthen strategic ties between India and China/Russia.

China

China stands the most to gain from Indian instability, as it is a rising power very analogous to where China itself was 15-25 years ago. While China does cooperate to a not-insignificant degree, India's democratic system, economic competitiveness, and security interests often directly threaten Beijing. Promoting Maoist influence into India is not a new concept to Beijing, and cultivating instability through inequality-related rhetoric can embroil India into domestic strife that would leave New Delhi preoccupied and unwilling/unable to combat Chinese interests across South Asia. Beijing should also be careful to upset a nation of this risk-acceptant nature that is highly nationalistic and does not view China favorably; Indian unity is far more likely in the state of crisis compared to fractionalization.

Russia

As an emerging player in the region, Russia has little interest in India beyond continuing their strategic military-technical and civil-nuclear energy cooperation. Social cleavages that may emerge from the massive inequality in India provide little short-term benefit to Russia in any meaningful way; however, any divides that hamper US influence will be looked upon favorably by Moscow.

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