Isolation and Inequality: Evidence from Sanctions on North Korea

[Preliminary and incomplete. Please do not circulate.]

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Abstract

Global trade has increased at an unprecedented rate since the 1990s. At the same time, countries have increasingly used economic sanctions to punish other countries and isolate them from the gains from trade. This paper examines how inequality evolves in a country when it becomes more isolated from international trade and finance. In particular, I examine how economic sanctions impact inequality in North Korea. I hypothesize several channels from the literature. Regional favoritism would imply that an autocrat would reallocate resources to major urban areas. Isolation could promote import substitution and industrialization. On the other hand, isolation could force countries to shift production away from capital intensive goods and towards natural resource intensive goods. Lastly, trade would likely move to regions where trade frictions become relatively lower. The fluctuation of sanctions on North Korea provides a unique setting to examine these predictions. Sanctions were initially relaxed during the 1990s but drastically increased since the mid 2000’s as it pursued nuclear weapons. Furthermore, labor is not mobile in North Korea, which makes it an ideal setting to infer economic inequality from regional inequality. I use satellite night lights data to examine how sanctions impact regional economic inequality and use commodity level trade data to examine how sanctions impact production based on factor intensity. Though the economic sanctions were likely exogenous to domestic inequality within North Korea, I also use the majority party share of US House Foreign Affairs Committee as an instrumental variable. The Foreign Affairs Committee oversees legislations relating to sanctions and the majority party share strongly predicts the level of sanctions. I find that sanctions increase the luminosity gap between urban and rural areas. Consistent with regional favoritism, Pyongyang, the center of power is best shielded from sanctions. Manufacturing cities and mining areas also become relatively brighter as sanctions increase. Furthermore, luminosity near the Chinese border increases with sanctions as well as trade with China, which did not enforce the sanctions. On the other hand, traditional port areas become darker. As the country becomes more isolated economic activity shifts towards cities with political power or manufacturing and mining capabilities. However, production shifts away from capital intensive goods to natural resource intensive goods. These results imply that isolation from global trade increases domestic inequality, in a way that resources become increasingly allocated to those in urban areas of political power, and pushes the country to rely more on natural resources for production and trade. Furthermore, despite the intention to change the behavior of autocrats, sanctions increase inequality at a cost to the already marginalized hinterlands.

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