

Bargaining during War : Economic Interdependence and Conflict



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Hirshleifer (1988) asks some fundamental questions about conflict and cooperation (or peace and war), as follows: "Will increased productive interdependence between the parties, due for example to greater productive specialization and expanding trade, necessarily reduce the incentive to engage in conflict? Correspondingly, if warfare becomes more destructive does that necessarily tend to promote increased concentration of resources upon productive rather than appropriative activity?"¹ In another article (Hirshleifer, 1991) he continues, "In the first decade of the twentieth century, increasingly close productive ties among the national economies of Europe led to a widespread belief that large-scale war had become out of question. The First World War dashed these hopes."² Amid hawkish signals from North Korea despite South Korea's liberal policies, South Koreans ought to ask themselves a similar fundamental question, posed in the midst of bargaining during war: Will economic cooperation between the two Koreas lead to peace? Formal game-theoretical models indicate, "not necessarily."

¹ Hirshleifer, Jack. 1988. "The Analytics of Continuing Conflict" *Synthese*, 76, 201-233.

² Hirshleifer, Jack. 1991. "The Paradox of Power" *Economics and Politics*, 3, 177-200.

According to the Coase theorem, people will never pass up an opportunity to cooperate by means of mutually advantageous exchange. In any bargaining situation, people will be able to assess what would make themselves better off, provided the transaction costs for such a deal are small enough. In such a “Coasian world,” peaceful cooperation and settlements would be always (or almost always) possible, and thus the “circular flow” of the market economy would work well, i.e. firms produce goods for consumption, and consumers buy or exchange goods for their mutual benefit without any major disputes. On the other hand, Vilfredo Pareto stated, “The efforts of men are utilized in two different ways: they are directed to the production or transformation of economic goods, or else to the appropriation of goods produced by others.” The latter, seizing what others have produced (or defending against such invasions), is the dark side of economic activity, which is consistent with Machiavelli’s golden rule: *he who gets to rule, will get the gold*. Crime, strikes, revolutionary warfare, international confrontation, and war can be considered such a dark side, and are defined as “conflict.”³

The real world lies in tension between the Coasian world, where legal protection of property rights and enforcement of contracts are easily available, and the world of Machiavelli, where “might makes right”: if someone is too weak to protect his possessions, others may take them from him forcibly. In international relations, the enforcement of contracts cannot be easily achieved. In such an anarchic international system, an investment in military capability can be analyzed just as any investment – a decision to consume less today in order to have a better outcome tomorrow, after all a decision to attack another party is a risky gamble that a rational agent will take if and only if the expected benefits exceed the expected costs. In basic models of conflict theory, two ways of acquiring income are considered: productive investment for consumption goods (“butter”), or military investment for appropriative use (“guns”).⁴

A bargaining model with transaction costs (incomplete information) shows that a war can occur due to lack of information about the opponent – the rich side (South) does not know whether the poor side (North) is actually tough or weak. On the other hand, a simple bargaining model without any transaction costs (complete information) indicates that the South could appease the North by making a side payment, thus preventing any outbreak of war. A side payment can be made in various forms of economic cooperation, such as directly transferring resources (e.g., cash, energy, and foods) from the South to the North, developing tourism, developing an

³ Hirshleifer, Jack. 1994. “The Dark Side of the Force” *Economic Inquiry*, 32, 1-10.

⁴ Baliga, Sandeep, Tomas Sjöström. 2013. “Bargaining and War: A Review of Some Formal Models” *Korean Economic Review*, 29, 235-266.

industrial park in the North's territory, and increasing trade linkages between the two. The North specializes in military capability since it has a comparative advantage in conflict against productive investment. Furthermore, the model shows that a small increase in the North's production capability resulting from the side payment would reduce overall welfare, as the North becomes more threatening and weapons production increases by more than the increase in North's production capability. Thus, the model shows that helping the North become more productive can be counterproductive in this sense.


What if it were possible for the North to return for more after a side payment is made? This is what economists call a commitment problem. A lack of means of commitment is an important feature of an anarchic international system. Historic records of the Korean conflict clearly reveal such a commitment problem. After the first side payment is made, the North may not become any weaker than before, as it could convert the payment into weapons. In this environment, side payments may determine future bargaining power, and thereby the long-run distribution of resources may be influenced by dynamics of bargaining power between the two. In an extreme case, "salami tactics" could appear – the North does not get everything at once, only piece by piece, and eventually gets everything in the long-run. Therefore, it is important for the South to realize what they are dealing with is bargaining over objects that influence future bargaining power.⁵

It might be tempting for the South's regime to appease the North by making a side payment in order to achieve a short interim peace, as its leadership is decided through an election held every five years while the North's regime is practically indefinite. However, after the South makes this side payment, the North may come back with much stronger bargaining power and ask for more. Not only game-theoretical models but also records of history and reality indicate that the South ought to be cautious when it comes to economic cooperation with the North. The joint statement of the Fourth Round of the Six-Party Talks in 2005 states the following advances: "The Democratic People's Republic of Korea (DPRK) committed to abandoning all nuclear weapons and existing nuclear programs and returning." "The Six Parties undertook to promote economic cooperation in the fields of energy, trade and investment." "The Republic of Korea (ROK) reaffirmed the provision of 2 million kilowatts of electric power to the DPRK." Since then, South Korea (ROK), China, and Russia embarked on various economic cooperation projects with North Korea (DPRK), and a substantial amount of resources including energy

⁵ Fearon, James. 1996. "Bargaining over Objects that Influence Future Bargaining Power" Mimeo, Stanford University.

have been transferred to North Korea. In the present year of 2019, however, North Korea has become a de-facto nuclear power threatening other countries including the United States. The leader of North Korea has held three summit meetings with the President of the United States over the last two years (2018-2019), an achievement unprecedented during the earlier seventy years of the Korean conflict.

Thucydides (460-400 BC) claimed that there are three motives for war: greed, fear, and honor. Thomas Hobbes (1651) elaborated them as follows: "So that in the nature of man, we find three principal causes of quarrel. First, competition; secondly, diffidence; thirdly, glory. The first maketh men invade for gain; the second, for safety; and the third, for reputation. The first uses violence, to make themselves masters of other men's persons, wives, children, and cattle; the second, to defend them; the third, for trifles..."⁶

This current article summarizes Baliga and Sjöström (2013), which is a survey of game-theoretical studies that emphasize greed, and explains the Korean conflict around it. The poor specialize in military capability in order to extract resources from the rich and declare war if the rich do not offer sufficient tribute. If there is a war, military power determines the probability of winning the war. If there is no war, military power determines a bargaining position; hence the stronger military strength, the more favorable reallocation of wealth. Thus, a military build-up can be a signal which increases bargaining power even further. However, a build-up of military strength may have an unintended consequence: it may instill fear in other countries, and this can provoke them to attack in order to eliminate the threat. This brings up Thucydides' second motive for going to war: fear. Rather than discussing it here, I refer to Baliga and Sjöström (2012)⁷ and Park and Rabanal (2019).⁸ 

⁶ Hobbes, Thomas. *Leviathan*. Second Edition. London: Ballantyne Press.

⁷ Baliga, Sandeep, Tomas Sjöström. 2012. "The Hobbesian Trap" in the *Oxford Handbook of the Economics and Peace and Conflict*. Edited by M. Garfinkel and S. Skaperdas. Oxford University Press.

⁸ Park, Youngseok, Jean P. Rabanal. 2019. "An Endogenous Timing Conflict Game" unpublished manuscript.