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Trade openness and the settlement of domestic disputes in the shadow of the future

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ABSTRACT

We explore the severity of an ongoing dispute over a productive resource within a country that participates in world trade. In addition to arming, the contending groups in our setting choose either to engage in destructive conflict or to settle their dispute peacefully. Our central objective is to characterize the conditions under which the dispute might be resolved peacefully instead of violently. The analysis underscores the intuitive roles played by the destructiveness of open conflict and the salience of the future that have been identified in the previous literature, but it also provides some novel insights into how world prices and trade openness matter. Among other things, we find that, given conflict's destructive effects and time preferences, settlement is most likely to be supported as a stable equilibrium when the "traditional" gains from trade are largest. However, there also exist circumstances under which increased trade openness can induce destructive conflict.

1. Introduction

Scholars of international relations have long debated the effects of globalization on conflict. The classical liberal perspective emphasizes the opportunity costs of interstate conflict, arguing that countries will be less likely to go to a war with others when that means sacrificing the potential benefits of trade between them (e.g., Polachek, 1980).[1] By contrast, the realist perspective, emphasizing the anarchic nature of interactions between sovereign states, argues that international trade augments incomes and military strength so as to possibly amplify conflict (e.g., Waltz, 1979; Gowa, 1995). While the existing empirical evidence has not resolved this debate,[2] the increased incidence of intrastate wars in the post WWII period suggests that more insight could be obtained by focusing on this type of conflict.[3]

This paper analyzes the severity of a dispute over a contested resource within a small nation that trades in world markets, when that dispute is ongoing. Our central objective is to characterize the conditions under which the dispute might be resolved peacefully instead of violently. The analysis builds on the static model of domestic conflict within a small country and international trade presented in Garfinkel et al. (2008).[4] It views conflict as resulting from weak

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[1] For an overview, also see Gilpin (1987, pp. 26-31).

[2] See, for example, Barbieri and Schneider (1999).

[3] Blattman and Miguel (2010) provide a comprehensive survey of the causes and consequences of civil wars.

[4] Our focus on a small country means that product prices are given exogenously. See Skaperdas and Syropoulos (2001) who use a similar static framework, generalized in Garfinkel et al. (2015), to study globalization and interstate conflict. Dal Bó and Dal Bó (2011) study international trade and domestic conflict in a different, though similarly static setting.

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institutions of property rights and enforcement. Disputes between groups over the nation's resources—for example, oil and minerals—induce those groups to arm so as to take control of a larger share.[5] But, departing from Garfinkel et al. (2008), the analysis distinguishes between mobilization of resources to arm and the deployment of those arms in open conflict, along the lines of Garfinkel and Skaperdas (2000), McBride and Skaperdas (2007), and McBride and Skaperdas (2014).[6]

More specifically, once the contending groups have made their arming choices, they choose how to resolve their dispute. One option involves violent or open conflict, modeled as a winner-take-all contest, with some fraction of the nation's remaining resources (after arms have been produced) being destroyed as a result.[7] The other option, supported by the arms produced and the threat of open conflict, involves a peaceful division of the contested resource. Given whatever arms they choose, the contending groups always have a short-run incentive to negotiate a peaceful settlement, for that option allows them to divide the contested resource without having to deploy arms and incur destruction. However, when the groups take a longer-run perspective, settlement need not emerge as a subgame perfect, Nash equilibrium. The reason is that settlement in the current period concerns the division of resources only in that period; absent the possibility for the groups to commit to a division of the contested resource in the future, settlement requires some diversion of resources away from the production of goods for consumption in the future as well as in the current period. Open conflict in the current period, by contrast, gives the victor a strategic advantage in future conflict, so that fighting today reduces future arming costs relative to those under settlement. In fact, open conflict is always a subgame perfect, Nash equilibrium. Moreover, depending on world prices, trade costs, the shadow of the future, and the degree of conflict's destructiveness, open conflict could Pareto dominate peaceful settlement.[8]

Our analysis characterizes the conditions that ensure settlement can also arise as an equilibrium. Along the lines of the existing theoretical literature, our findings underscore the intuitive roles played by the destructiveness of conflict and the salience of the future (or the "shadow of the future"), with the former increasing the relative appeal of settlement and the latter reducing it. For example, peaceful settlement is more likely to be Pareto dominant, given the world price and trade costs, when conflict's destructive effects are sufficiently large and the shadow of the future small.[9] Nonetheless, the Pareto dominance of peaceful settlement over open conflict cannot ensure its emergence as another subgame perfect, Nash equilibrium. An additional requirement is that settlement be immune to unilateral deviations in arming and in the choice of peaceful settlement. Our analysis shows that settlement is more likely to arise as a stable equilibrium under conditions that are generally stronger and considerably more nuanced than those that ensure its Pareto dominance.

Moving beyond the existing theoretical literature, we also demonstrate how world prices and trade openness or, more generally, globalization (captured, for example, by reductions in trade costs) matter. First, they matter for payoffs given the method by which the contending groups resolve their dispute. Here the influence is twofold: the direct, terms-of-trade effect and the indirect effect that works through arming incentives. As expected, regardless of whether the groups anticipate conflict or settlement or even when they consider a unilateral deviation from settlement, an increase in the world price of the good that employs the contested resource intensively increases the value of the contested resource relative to the cost of producing arms, and thus amplifies arming incentives. Provided that the resource constraint in the production of arms is not binding, the wasteful diversion of resources into arming expands with increases in that world price. This expansion occurs regardless of the pattern of trade. Hence, given the method by which the groups resolve their dispute (i.e., settlement or conflict), the introduction of trade, improvements in the country's terms of trade, and trade liberalization could reduce welfare. Moreover, trade could be dominated in welfare by autarky for an intermediate range of prices that make the country a net exporter of the good produced intensively with the contested resource.[10] However, because the magnitude of the wasteful diversion of resources into arming depends on whether groups settle or fight, the pattern of trade itself depends on how groups resolve their dispute. As such, a terms-of-trade improvement under, say, open conflict could be a terms-of-trade deterioration under peaceful settlement.

Second, changes in world prices and trade openness affect the groups' incentives for coalitional and/or unilateral deviations from settlement and thus can influence the incidence of destructive conflict and/or peaceful settlement as well as welfare. Therefore, depending on the rate of destruction and time preferences, an improvement in an economy's terms of trade could bring about a switch from settlement to open conflict or conversely, with its attendant consequences for welfare. We find, for example, that as long as the groups value the future, trade openness can induce destructive conflict; however, it is also possible that trade openness helps to support peaceful settlement as a stable equilibrium, especially when world

[5] See Klare (2001) for an overview, including many examples of how disputes over resources can and have led to conflict, both within and between countries. This sort of conflict is distinct from insecurity in trade where weak institutions of governance can undermine the fulfillment of implicit or implicit contracts between trading partners (e.g., Dixit, 2004, 2015) or can induce parties to take protective measures against cheating or theft by other parties (e.g., Anderson and Marcouiller, 2005) that are sufficiently costly to make trade undesirable.

[6] See Fearon (1995), Skaperdas and Syropoulos (1996), and Powell (2006) for similar approaches.

[7] The destructive effects of civil wars (e.g., lost lives, damaged property, and so on) have been significant (see Collier et al., 2003).

[8] In such cases, open conflict is a "strong perfect equilibrium" or, equivalently (in the two player setting we consider), a "perfectly coalition-proof" equilibrium (Bernheim et al., 1987).

[9] See McBride et al. (2014), who obtain a similar welfare implication in the context of litigation. This result would also seem to follow from the analyses of McBride and Skaperdas (2007) and McBride and Skaperdas (2014).

[10] See Garfinkel et al. (2008) for a similar finding under non-destructive conflict.