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Does War Impede Trade? A Response to Anderton & Carter*

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Anderton & Carter claim that war significantly diminishes trade, challenging the earlier argument by Barbieri & Levy that there is no apparent systematic relationship between war and trade. Three main problems with Anderton & Carter's analyses are identified. First, and most importantly, they do not pay sufficient attention to the political dimension of trade or war. Second, they attribute more specificity to commercial liberal theory than actually exists. Third, the authors' empirical findings provide mixed support for liberal theory. While Anderton & Carter advance the debate, there is not enough evidence to support their conclusion that, on balance, war significantly impedes trade and that this fact deters leaders from engaging in war.

Introduction

The relationship between trade and war has generated a lively debate.[1] Liberals argue that trade promotes peace, since the fear of losing commerce causes political decisionmakers to refrain from engaging in war with important trading partners. In Barbieri & Levy (1999), we argued that trade ties do not always deter war because war, in many cases, does not significantly harm trading relationships. Thus, liberals are incorrect in their argument that leaders consider trade-related losses as an important cost of conflict when calculating the utility of going to war. Anderton & Carter (2001) responded to our study by offering evidence that trade does promote peace. While Anderton & Carter make an important contribution to the debate by extending the analysis of the war–trade relationship to major power dyads and by suggesting new empirical tests, we are not yet convinced.

We see three problems with Anderton & Carter's study. First, and most importantly, they do not acknowledge sufficiently the political dimension of trade or war. Second, they attribute more specificity to commercial liberal theory than actually exists. Third, the authors' empirical findings provide mixed support for their argument. While Anderton & Carter provide plausible evidence that war impedes trade in some cases, the evidence is not sufficient to support their conclusion that on balance war significantly impedes trade.

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[1] For summaries of the trade–conflict debate, see McMillan (1997) and Barbieri & Schneider (1999).

Theoretical Considerations

Anderton & Carter (2001: 445) begin by noting three premises underlying the hypothesis that trade promotes peace: '(1) societies achieve salient economic gains from their trading relationships; (2) serious conflict among societies disrupts trade; and (3) premises 1 and 2 enter the calculus of political decision-makers.' They add: 'If any one of the three premises does not hold, the liberal linkage between trade and peace is broken.' It would be more correct to say that this *particular* liberal linkage between trade and peace is broken, because this set of premises constitutes only one possible causal mechanism (though probably the most widely emphasized one) leading from trade to peace in liberal international theory.

Anderton & Carter's basic trade model is useful for illustrating the adverse effects of trade restrictions. However, the model ignores political factors that are so important in understanding trade and war.[2] We agree with Anderton & Carter's assessment that any restrictions on trade generate net losses within and between states, whereby some groups win and others lose. Nevertheless, we find it difficult to argue that leaders would be so concerned about trade-related losses, particularly when suffered by an enemy state,[3] that it would influence a decision about war. If leaders were so averse to negative consequences of trade restrictions, policies that result in barriers to trade should be rare. Yet, it is difficult to think of any state that is free from barriers to trade. Moreover, Anderton & Carter ignore the fact that a leader contemplating war assumes that there would be some benefit to such action. Therefore, we must consider political and economic forces in tandem when evaluating either trade or war.[4]

Anderton & Carter's model, and indeed the trade-promotes-peace hypothesis more generally, raises some important analytic issues. A state's preference for peace over war does not necessarily lead it to adopt a strategy of avoiding hostile actions. If a state that fears the economic costs of war believes that its adversary has an even greater fear of war, it may attempt to exploit the adversary's fear through coercive threats designed to advance its own interests. In the absence of additional information about leaders' expectations about the economic benefits of trade, the impact of war on trade, and each side's risk orientation and domestic sensitivity to the costs of war, the outcome – and hence the impact of trade on conflict within a dyad – is theoretically indeterminate (Morrow, 1999: 487). One cannot explain a dyadic outcome with the interests of individual states without a theory of strategic interaction.

Another theoretical issue, and one that has direct implications for the question of what counts as evidence in support of the trade disruption hypothesis, relates to Anderton & Carter's characterization of commercial liberalism's predictions about what happens to trade after a war ends. Anderton & Carter (2001: 447) argue that 'economic theory predicts that trade will resume after cessation of

[2] We identify some of these political variables in Barbieri & Levy (1999), though we do not formally incorporate them into our empirical times-series analysis.

[3] Anderton & Carter (2001: 447) argue that 'in a two-nation supply and demand model [a restriction on trade] would hurt *A* more than it helps *B*, i.e. there is an overall net cost from restricting the trade of a good'. Utility-maximizing actors are influenced only by their own costs and benefits, not by overall net costs to both parties.

[4] It may be true that domestic groups that benefit from trade often attempt to dissuade governments from taking actions that might lead to war and disrupt trade. Once war begins, however, those same domestic groups may have incentives to influence the government to maintain trade. Governments are often dependent on key domestic groups for political and economic support and may choose to allow certain types of trade with the enemy to continue, either for the good of the economy as a whole or for their own political survival. There are also dyadic and systemic factors that encourage trade during wartime. Leaders may fear that if they cut off trade they will lose all possible economic leverage over the adversary during intrawar negotiations, or that they will lose that trade to third parties and not be able to recover it quickly (Barbieri & Levy, 1999).

wars', and on this basis include as supporting evidence for liberalism not only a decline in the level of trade during a war, but also a recovery of trade in the period after the termination of war. But liberal theory offers no clear predictions with regard to trade in the immediate aftermath of the termination of war (Barbieri & Levy, 1999). The anticipated trade-related costs that are hypothesized to deter war may refer not only to the loss of trade during the war itself, but may also include the adverse impact of war on the trading relationship in the years following war. We imagine that if trade were to influence a leader's decisions about war, the leader would be more deterred if she/he anticipated serious harm to the trading relationship, rather than just temporary reductions in trade followed by a quick resumption of trade. For example, the liberal vision of a community of shared interests created and reinforced by trade may be shattered by war and be very slow to recover in its aftermath. In addition, whether states trade in the postwar period would depend, in part, on how the conflict was settled. War termination may not resolve the underlying conflicts between states, particularly between enduring rivals, and there may be increased risks in resuming trade with the adversary after a war.

Also, economic theory provides clues about the potential for trade to increase or decrease after war. The victor in war might impose conditions that include increased trade. On the other hand, if hostilities remain high, there might be a higher risk for traders, which could be translated into higher insurance costs to transport goods. There may be other factors that affect trade between wartime adversaries after the termination of hostilities. For example, economic restraints designed to prevent the economic and military resurgence of the defeated adversary may depress trade, coercively enforced reparations may increase trade, and states may initiate war for the purpose of opening up markets, trade routes, or to gain access to resources. In short, the resumption of trade following war is critically dependent on the political context in a manner that Anderton & Carter do not sufficiently take into account. The postwar implications of the trade-promotes-peace hypothesis would need to be specified with far greater precision before evidence of a recovery of trade in the immediate aftermath of war can be used in support of that hypothesis.

Research Design and Analysis

Anderton & Carter's analysis raises a number of more specific methodological questions. First, the time-series methods that they employ are quite sensitive to sample size; the shorter the temporal period, the greater the instability in the statistical estimators. The relatively short ten-year time periods before and after a war that Anderton & Carter use suggest that we exercise a certain degree of caution in interpreting their findings.[5]

Another issue concerns case selection.[6] Anderton & Carter are not clear about their selection criteria, although we assume that their choices (like ours) are significantly shaped by the availability of data. We have some questions about 5 of the 14 major power dyads Anderton & Carter analyze. They examine France and Germany in the years from 1860 to 1981, but it is unclear how they treat 'German' trade prior to unification in 1871. Anderton & Carter also look at Italy and Austria–Hungary from 1905 to 1928, ten years past the end of the Dual Monarchy. They include UK/China and

[5] We had similar problems with some of our dyadic analyses, and for that reason remained cautious about over-interpreting our findings.

[6] A more serious issue of case selection relates to the fact that all of the cases Anderton & Carter (and Barbieri & Levy, 1999) analyze are cases of war. If trade has a strong deterrent effect on war, war is unlikely to occur, and the only cases we observe are those in which the deterrent effect is weaker. An important task for future research is to estimate the magnitude of these selection effects.

USA/China trade beginning in 1940, during the civil war and clearly before China might be considered a major power.[7]

In addition, many of the dyads they observe come from the same war (five from World War I, six from World War II, and two from the Korean War). The possibility that a state adopts similar trading-with-the-enemy policies towards its different adversaries, or that allies adopt similar policies in order to maintain alliance cohesion, raises questions about the number of truly independent cases in their sample. All case selections and operationalizations involve some trade-offs, but some of the choices made by Anderton & Carter, while not indefensible, must raise some doubts about the inferences they want to draw.

Another issue concerns how best to measure trade. Anderton & Carter's strategy raises concerns for both of our studies. They argue that liberals emphasize trade volume, rather than trade value, in assessing the importance of trade. They attempt to measure trade volume by using the reporting state's consumer price index (CPI) to adjust trade values. Liberal political or trade theory does not necessarily suggest, however, that the volume is more important than the value of trade ties. Presumably, a state that attaches greater value to small quantities of a good might be less willing to cut ties, compared with a country that conducts large quantities of trade in low-value goods. In fact, one might expect that higher values, rather than higher quantities of trade, would have greater implications for the cost of forfeiting trade during peace and wartime.

A better measure for both studies would permit us to incorporate both the quantity and price of goods traded. Anderton & Carter make a valid point in questioning our use of unweighted price figures. Yet, we argued that trade volume most likely declines during war, but the value of that trade increases, since prices on the limited goods traded would be higher than in peacetime. If anything, Anderton & Carter's comments about volume versus value simply highlight the need to incorporate information about quantity, price, alternative suppliers, and the actual commodities traded. Unfortunately, Anderton & Carter's solution of employing the CPI index of the reporting country to adjust trade values for inflationary trends does not solve the problem. It is not clear that the reporting state's CPI is applicable to its trade partner or that the bundle of goods used to calculate the CPI corresponds to the price changes for goods traded externally. Finally, we rely on information from each state in a dyad, rather than relying on only one state, as Anderton & Carter do, since this enables us to reduce the bias that results when one state tends to over or under-report the value of trade. In the end, Anderton & Carter's measure, like ours, ends up capturing trade value or at least a rough approximation of the value of trade conducted during wartime.

Turning to their specific evidence, Anderton & Carter argue that for their 14 major power dyads (not all of which are independent), 37 of the 42 trade disruption coefficients have the predicted sign, and 27 of these are statistically significant. Given the problems posed by sample size for these analyses, we think it is inappropriate to place much weight on coefficients that are in the predicted direction but that lack statistical significance. Theoretically, the Barbieri & Levy (1999) hypothesis is not that war increases trade, but only that war does not decrease trade. Methodologically, statistical estimators in relatively short time series are unstable, and there is the potential for substantial measurement error because of widespread incentives to under-report trading

[7] Anderton & Carter also include the UK/USA from 1765 to 1793, without clarifying whether the transition from colony to state might put this case in a separate category and make it non-comparable.

with the enemy during wartime. Thus, we focus only on statistically significant coefficients and only those relating to trade during war, because evidence of an increase in trade after the termination of war is not necessarily supportive of the trade-promotes-peace hypothesis.[8]

With respect to the level and rate of change of trade during war, Anderton & Carter find that there is a statistically significant decline in the level of trade in 7 of the 14 major-power war dyads, with trade continuing to decline over the course of the war in a statistically significant 8 of 14 cases (though 2 of the dyads exhibit a statistically significant increase in trade from the beginning to the end of the war). Thus, for major powers, trade is significantly reduced in roughly half of the wars analyzed, with slightly more than a 50% chance that trade will continue to decline over the life of the war.

Anderton & Carter concede that their findings for the analysis of the impact of war on trade for 13 minor power and mixed dyads are weaker than for major power dyads. The war-level variable is negative and statistically significant in three of seven cases for major–minor short wars and one of four cases of major–minor long wars.[9] This leaves 4 of 11 cases of mixed dyads for which war has a significant negative effect on trade. Both cases of minor power dyads (one long and one short) show a statistically significant impact of war on trade. Thus, for non-major power dyads, 6 of 13 cases show a significant impact of war on trade, basically the same percentage as for major power dyads. If we look at the aggregate results of the Anderton & Carter study for all types of dyads, we see that there is a statistically significant reduction in trade during war in 13 of 27 cases (if we exclude the theoretically problematic postwar recovery in trade).

We could argue about whether the glass is half empty or half full, but the real question, going back to Anderton & Carter's third premise, is how much political leaders' decisions regarding war and peace are likely to be affected by a 50% chance of a significant drop in trade (assuming these results are generalizable and perceived by political leaders), given other strategic, diplomatic, domestic political, and economic interests that are usually at stake. This is an empirical question, and one that needs to be investigated, but we anticipate that the likely answer, in most cases, is 'not much'.

Conclusion

In our earlier study (Barbieri & Levy, 1999: 463), we concluded that 'in most cases war does not have a significant impact on trading relationships' involving minor powers or mixed dyads. Anderton & Carter's analysis does not contradict this statement. By generating plausible but provisional evidence that war is associated with a significant reduction of trade in a non-trivial number of cases, they provide a strong argument for the need for further research on the trade disruption hypothesis. But they go too far, in our opinion, in suggesting that 'the weight of the evidence . . . favors the trade disruption premise' (2001: 455), because they fail to demonstrate a systematic and uniform relationship. Preliminary evidence that dyadic trade frequently declines with the outbreak of war, but that just as frequently trade does not decline, suggests that future research on this question should shift away from the aggregate impact of war on trade, and attempt instead to identify the conditions under which war leads to a decline in trade and the conditions under which it fails to do so.

[8] In 12 of the 14 cases, there is a statistically significant increase in the level of trade after the termination of war.

[9] If these patterns were confirmed in a larger number of cases, they would contradict Anderton & Carter's hypothesis that long wars have a greater disruptive impact than short wars.

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