Globalization mitigates the risk of conflict caused by strategic territory

Quentin Gallea[a,b,1] **and Dominic Rohner**[b,c,d,1,2]

[a]Department of Economics, University of Zurich, 8001 Zurich, Switzerland; [b]Enterprise for Society (E4S) Center, 1015 Lausanne, Switzerland; [c]Department of Economics, Hautes Etudes Commerciales (HEC) Lausanne, University of Lausanne, 1015 Chavannes-près-Renens, Switzerland; and [d]Centre for Economic Policy Research, London EC1V 0DX, United Kingdom

Edited by Matthew O. Jackson, Stanford University, Stanford, CA, and approved July 23, 2021 (received for review March 23, 2021)

Globalization is routinely blamed for various ills, including fueling conflict in strategic locations. To investigate whether these accusations are well founded, we have built a database to assess any given location's strategic importance. Consistent with our game-theoretic model of strategic interaction, we find that overall fighting is more frequent in strategic locations close to maritime choke points (e.g., straits or capes), but that booming world trade openness considerably reduces the risks of conflict erupting in such strategic locations. The impact is quantitatively sizable, as moving one SD (1,100 km) closer to a choke point increases the conflict likelihood by 25% of the baseline risk in periods of low globalization, while reducing it during world trade booms. Our results have important policy implications for supranational coordination.

strategic territory | conflict | trade | globalization | straits

Since ancient times, control of strategic trade routes has been very lucrative and coveted, but also a source of violent disputes. For example, blood has been shed over controlling the straits of Salamis (480 BC); of Gibraltar ("Batalla del Estrecho," late 13th century); of Tsushima (1905); of Otranto and Dover (during World War I); of Badung, Makassar, Sunda, and Malacca (during World War II); of Taiwan (1950s); of Hormuz (since 2011); and of Kerch (2018), to name just a few.

Competing for the control of strategic waterways and world trade routes has highlighted potential dangers of economic integration, and various scholars, politicians, and journalists have blamed globalization for surges of conflicts and other ills of our time. This view has been formulated most prominently by Vladimir Lenin in his 1917 pamphlet *Imperialism, the Highest Stage of Capitalism* (1). Now, over 100 y later, these ideas of trade and globalization being responsible for turmoil still echo prominently in the public sphere. Among other allegations, globalization has been recently accused in media articles of triggering wars and "killing the globe."*

This contrasts with an intellectual tradition of arguing that globalization, business, and trade may—by fostering interdependence—curb the incentives for engaging in domestic and international conflicts. This argument has its roots ranging as far back as the thinking of De Montesquieu [1758 (2)] or Angell [1909 (3)], has been refined verbally by an array of "liberalist" scholars in international relations (see the survey in ref. 4), and has recently been scrutinized in formal game-theoretical models (see, e.g., refs. 5 and 6).

While a small body of empirical research has linked trade to interstate wars (4, 5, 7, 8), the arguably even more pressing question of how globalization and trade affect domestic conflicts has received even less attention.† This is a major gap in the literature, given that since World War II, roughly 80 to 90% of wars have been within rather than between states (11). Hence, the goal of the current article is to study the question of how places close to strategically important trade routes may be more or less subject to civil conflict and how their fate is affected by surges in globalization.‡

We have built what—to the best of our knowledge—is the most precise and fine-grained dataset of strategic location importance covering the entire globe. Our dataset allows us to investigate, using a regression analysis, how a location's strategic centrality affects its risk of being drawn into an armed conflict and how globalization can influence this centrality-conflict nexus.

In order to develop an empirically testable hypothesis to guide our statistical investigation, we have built a game-theoretic model that systematically studies the incentives for engaging in conflict (*SI Appendix*). As discussed in detail in *SI Appendix*, our framework predicts that under mild conditions in years of low international trade openness, strategic territory tends to entail above-average levels of conflict (due to the strategic value of

Significance

In an era where global trade is under pressure, it is heatedly debated whether a more integrated, globalized world is fueling or appeasing conflicts. Past studies have focused on how trade links impact interstate wars, but the effects of globalization on domestic conflict have been severely understudied. Our dataset of the strategic importance of each point of the globe allows us to shed light on this controversy. This algorithm-based measure is constructed by using exclusively natural terrain features, thereby avoiding common methodological pitfalls confounding results. We find that while strategic locations may often be the object of armed competition, periods of international trade booms increase the incentives to protect trade routes and attenuate the conflict risk at strategically important locations.

Author contributions: Q.G. and D.R. designed research, performed research, contributed new reagents/analytic tools, analyzed data, and wrote the paper.

The authors declare no competing interest.

This article is a PNAS Direct Submission.

[1]Q.G. and D.R. contributed equally to this work.

[2]To whom correspondence may be addressed. Email: dominic.rohner@unil.ch.

This article contains supporting information online at https://www.pnas.org/lookup/suppl/doi:10.1073/pnas.2105624118/-/DCSupplemental.

Published September 22, 2021.

*See, e.g., "Managing Globalization: The integrated economy as a cause of war" (*International Herald Tribune*, 20 February 2007), "How globalization breads conflict" (*Alternatives Economiques*, 16 January 2020), "Globalization is killing the globe" (*HuffPost*, 4 October 2010), or "Globalization's wrong turn" (*Foreign Affairs*, July 2019).

†One exception is ref. 9, which studied the impact of a country's trade openness on its civil war risk, finding that while trade openness may deter the most severe civil wars, it may increase the risk of lower-scale conflicts. Key differences between our current article and theirs is that our data are at a much more fine-grained level (cells instead of country), and we study the impact of strategic territory, which they do not. Our argument on third-party intervention is also related to the one that has been put forward in the independent work-in-progress paper that is ref. 10 studying US intervention in natural resource conflicts.

‡Somewhat related is also the literature studying what territorial features (e.g., rough terrain, high elevation, etc.) correlate with political violence (12–14). In terms of methods, we follow a similar approach as, e.g., refs. 15 and 16.

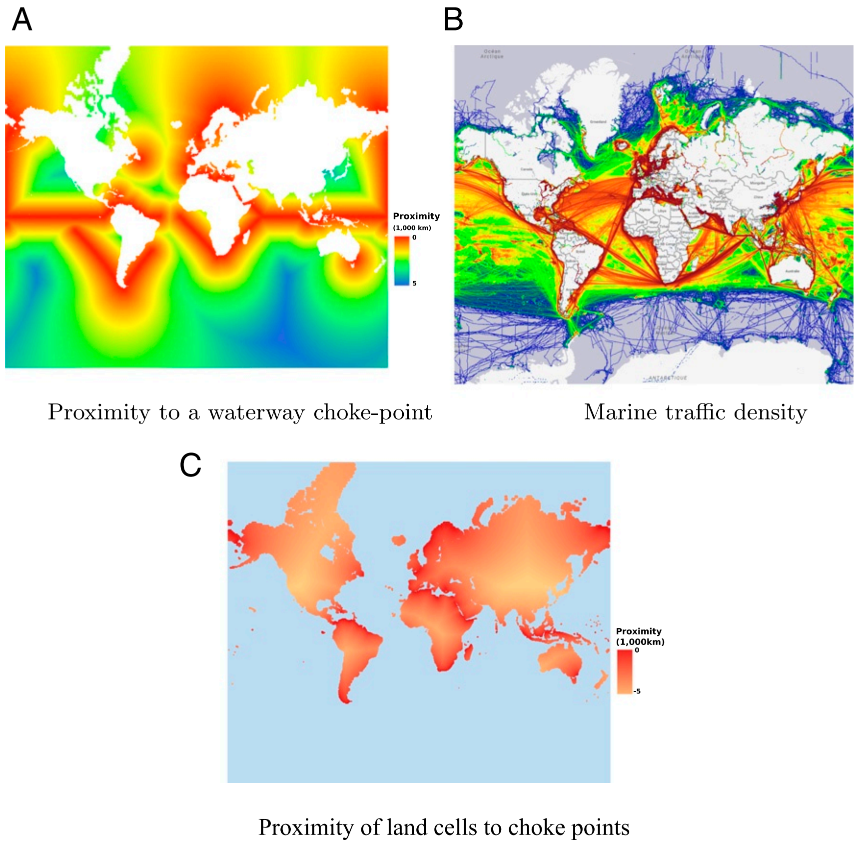

Fig. 1. Our measure vs. reality. The methods and data are described in depth in *SI Appendix*. *A* represents a "heatmap" of the proximity of water cells to our definition of waterways choke points (authors' calculations). *B* represents a heatmap of the density of marine traffic in 2017 (https://www.marinetraffic.com/). *C* represents the proximity of land cells to the nearest waterway choke points (authors' calculations). *B* image credit: MarineTraffic.com.

territory providing incentives for appropriation). In contrast, in years of roaring globalization, areas with strategic value are, on average, less combatted, as major international powers have incentives to intervene in local disputes to make sure that crucial trade routes remain open.[§] In what follows, we will present the data and methods, before confronting these predictions to the data.

Data and Methods

To carry out our empirical analysis, we have constructed a panel dataset that consists of grid cells of size 0.5×0.5 decimal degrees (55 km $\times$ 55 km at the equator) covering the whole world from 1989 to 2018. We have designed an algorithm to detect strategic zones in the sea, so-called maritime "choke points" (e.g., straits or capes) that are points of "natural congestion along two wider and important navigable passages" that are typically of key strategic importance for international shipping. Crucially, we have built this measure purely based on geographical features, which has the advantage of addressing a series of potential statistical biases—such as reverse causation—that would arise if we were to focus on measures of actual water transport volumes.[¶] In particular, drawing on a network model, we compute the betweenness centrality of any water location, allowing us to uncover where crucial strategic choke points lie. *SI Appendix* contains detailed variable definitions and sources and a full discussion of the construction of all variables.

It is widely accepted that maritime choke points are of crucial importance to world trade and global energy security. Our algorithm identifies real ship density and all famous maritime landmarks, such as the straits of Hormuz or Malacca and the canals of Suez or Panama. Furthermore, our measure provides a fine-grained scale of strategic importance for any water spot worldwide, including the great number of less well-known locations. Fig. 1*A* depicts for each water location how close it is to a choke point, as computed using our algorithm. Fig. 1*B* displays for illustration major marine traffic routes (observed density of ships in 2017 from https://www.marinetraffic.com/). Strikingly, the proximity to waterway choke points, as computed by our algorithm based on purely geographical features, matches remarkably well the actual marine trade routes, hence stressing the relevance of our measure.

After having computed strategic water choke points, we have then, in a second step, constructed, for all land locations, the distance to these waterway bottlenecks. The obtained values across the world are displayed in Fig. 1*C*. Darker colors indicate areas closer to choke points, which typically lie close to major straits and waterways, and brighter colors indicate zones that are further away from maritime choke points. This measure of the strategic importance of any land location worldwide is used as the main explanatory variable in our statistical analysis. We study its direct impact as well as how it interacts with the volume of world trade in a given year, which is measured by using world trade openness from the World Bank [trade in percentage of gross

[§]For example, in early 2020, France and the Netherlands started a naval mission with battleships in the Strait of Hormuz to protect commercial ships (last accessed 19 March 2020: https://www.reuters.com/article/us-mideast-iran-netherlands/netherlands-to-join-french-led-strait-of-hormuz-naval-mission-anp-idUSKBN1XZ25W).

[¶]As stressed recently by ref. 17, urbanization pattern (and, hence, shipping volumes) may be shaped, among others, by intergroup conflict.

Table 1. Regression analysis of the impact of maritime choke point proximity on violent conflict events

	(1)	(2)	(3)	(4)	(5)
	Any violence	State-based	Nonstate	One-sided	ln(deaths + 1)
Proximity	0.0031***	0.0022***	0.0002***	0.0007***	0.0013
	(0.0004)	(0.0002)	(0.0001)	(0.0002)	(0.0012)
Observations	1,94r,540	1,944,540	1,944,540	1,944,540	1,944,540
Adjusted R^2	0.022	0.017	0.005	0.009	0.019
Mean dep. var.	0.015	0.007	0.002	0.006	0.035
Latitude FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes

LPM estimates for model from (1) to (4) and OLS for model (5). Dep. var., dependent variable; FE, fixed effects. ***$p < 0.01$. SEs were clustered at the cell level. Proximity is minus the distance in SDs from the nearest choke point (one SD equals 1,100 km).

domestic product (GDP) (18)]. *SI Appendix* contains a graphical representation of the evolution of this variable, as well as of other key covariates.

In terms of the dependent outcome variable, for measuring conflict, we draw on fine-grained geolocalized information on conflict events from the Uppsala Conflict Data Program (UCDP) Georeferenced Event Dataset (GED) (19). This allows us to know for each cell and year whether at least one conflict event took place, as well as the types of events and their number. As mentioned, all data, variable construction, and methods are described in detail in *SI Appendix*.

Descriptive summary statistics of all variables of the analysis are provided in *SI Appendix*. In a nutshell, the final sample is composed of 64,818 cells covering the world from 1989 to 2018, resulting in a total of 1,944,540 observations. The unconditional likelihood for any type of violent events for the whole sample at the cell level is 1.5%, while for state-based it is 0.7%, for nonstate 0.2%, and 0.6% for one-sided events. The mean number of deaths is 1.126 per year per cell. The difference between the mean value of the outcome for the cells "close" to choke points (above median by proximity) and for those "far away" (below median by proximity) is also displayed. The difference is statistically significant and positive for any type of violence (using a t test with a bilateral null hypothesis; *SI Appendix*). These results highlight a positive association between the proximity to waterway choke points and violent events, which we shall investigate in more depth in what follows.

In terms of the methodology used, we carry out a multivariate regression analysis, focusing on Linear Probability Models (LPMs) when facing a binary dependent variable and on Ordinary Least Squares (OLS) estimators otherwise. We will include a battery of fixed effects, filtering out time-invariant location characteristics, as well as global shocks. Specifically, in some specifications, we go as far as including fixed effects at the cell level (i.e., separate constant terms for each cell), which control for all local, time-invariant potential confounders such as local climate, elevation, sea access, distance to capital, and historical population density, among others. We also control for annual time effects, which analogously capture all global shocks occurring in a given year, such as, for example, major geo-political shocks like the fall of the Soviet Union or 9/11, major recessions such as the subprime crisis, or health shocks such as a pandemic (e.g., severe acute respiratory syndrome or COVID-19). The various specifications, as well as additional estimation results, are reported in *SI Appendix*.

Results

We start by running a very simple regression specification before gradually increasing complexity. In particular, we focus first on comparing areas with high strategic importance scores (according to our measure) with cells for which our algorithm has found a lower strategic importance (i.e., that are further away from maritime choke points). Our main explanatory variable is "proximity" (to the nearest choke point), and the dependent variable of interest is the likelihood of experiencing at least one violent event in a given cell and year. The goal of this initial table being to report the parsimonious "raw" correlation, we limit ourselves to controlling for latitude fixed effects (i.e., a specific constant term for each latitude, filtering out climate zone effects and earth perimeter[#]) and annual year dummies (which account for global shocks). All methodological details of this specification are provided in *SI Appendix*.

The regression analysis of Table 1 reveals that overall areas closer to maritime choke points face a greater risk of conflict, as shown by the fact that in all columns, the proximity variable has a positive, statistically significant coefficient. This holds when including a dummy for any violent event (column [col.] 1) and also for various subcategories of violent events (col. 2–4). It is imprecisely estimated for a violence intensity measure (col. 5). The effect is quantitatively sizable, as one SD greater proximity (i.e., 1,100 km closer to a choke point, corresponding to the straight-line distance from Paris to Rome or New York to Chicago) in the main specification (col. 1) corresponds to a 0.31-percentage-point increase in conflict risk, which is about a fifth of the baseline conflict risk for a given cell and year (1.5%). Note that the results of col. 2–4 show that the quantitatively largest effect emanates from state-based conflict (col. 2).

Next, we investigate the main prediction of our game-theoretic model (*SI Appendix*), namely, that while proximity to maritime choke points increases the conflict risk for moderate levels of trade openness, for peak levels of globalization, the prediction reverses, and locations of strategic importance are expected to benefit from a relatively low likelihood of conflict. We illustrate graphically how the locations of strategic choke points relate to conflict events—both for periods of high trade (Fig. 2 *A* and *C*) and low trade (Fig. 2 *B* and *D*). We zoom in on key strategic regions: Panama Canal and Cape of Good Hope (a full map of the world is depicted in *SI Appendix*). Visual inspection suggests—in line with our predictions discussed above—that strategic territory may bear a conflict potential, in particular, during periods of low trade, while in times of high trade volumes (when major powers are particularly keen to keep world trade routes open and secure), conflicts may be less concentrated around choke points. While these associations are interesting, they could be driven by various confounders, and, hence, we need to perform in what follows an in-depth regression analysis

[#]As the cells are 0.5 × 0.5 decimal degrees, their surface shrinks as the distance from the equator increases.

https://doi.org/10.1073/pnas.2105624118

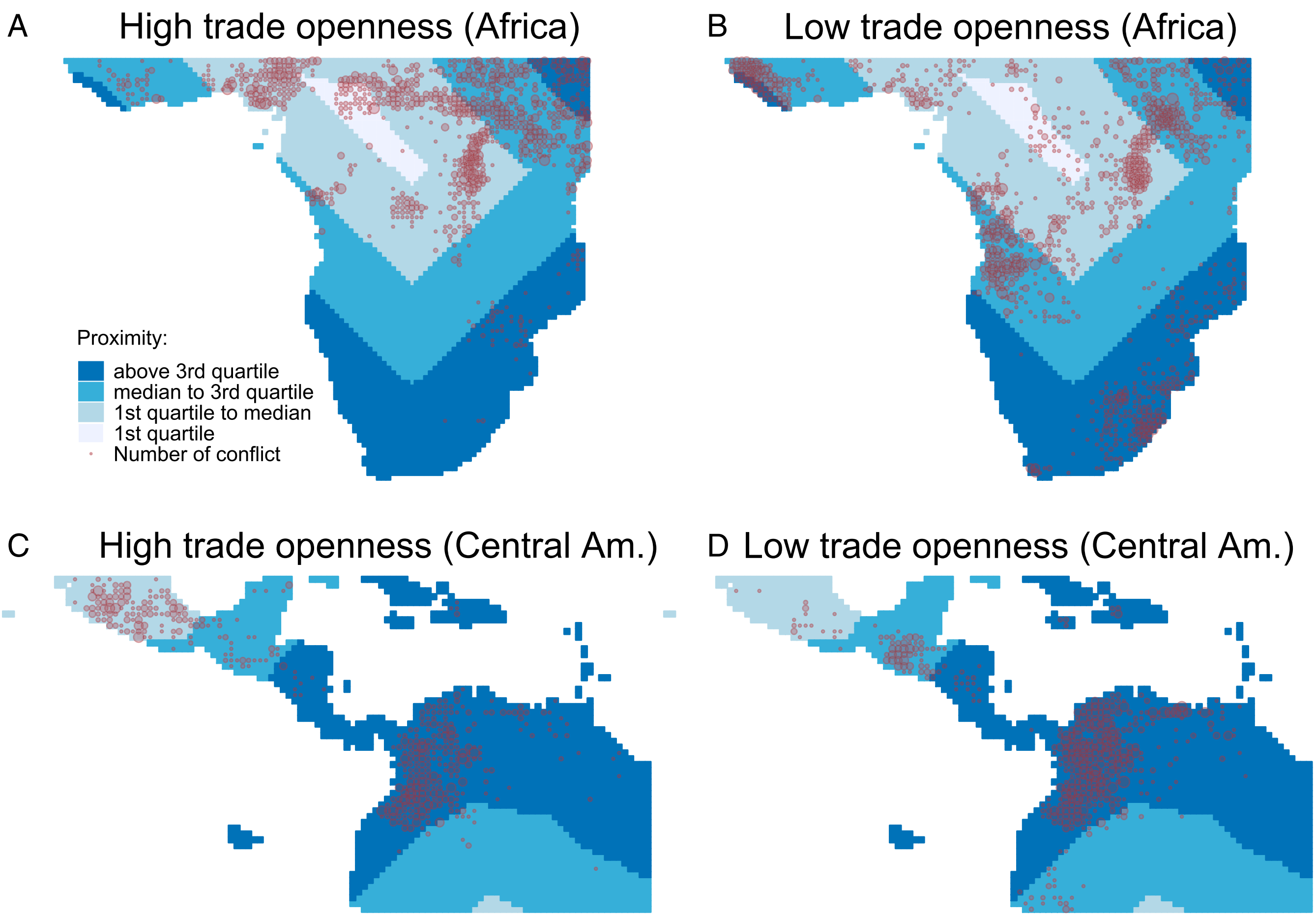

Fig. 2. This figure highlights the relationship between conflict and distance to choke points for high and low trade periods. Proximity-to-choke-points variable was constructed by the authors based on purely geographical distances (as described in *SI Appendix*); conflict data are from UCDP GED (as described in *SI Appendix*). Bigger red circles represent higher numbers of conflict events. *A* and *B* correspond to years of above median trade openness, while *C* and *D* correspond to years of below median trade openness. Am., America.

that allows us to control for confounding variables and statistical biases.

At present, we move to a regression analysis with this interactive effect. Note that *SI Appendix* presents a simplified regression specification (featuring the same controls as in Table 1) and provides all methodological details for the more demanding main specification that we shall now discuss. This main regression specification features, as before, as dependent variables several measures of violent events. As a main explanatory variable, we still focus on the proximity to maritime choke points, but now not only as a linear term, but also in interaction with a measure of world trade openness (imports plus exports) in percentage of world GDP. In this main baseline specification, we include a more stringent set of controls. As before, we control for annual time dummies (which account for global shocks) and latitude fixed effects (capturing, among others, climate zone effects, earth perimeter, and cell size), but now we also control for country fixed effects. These different constant terms for each country allow us to control for any time-invariant country characteristics (such as colonial heritage, tradition of autocracy, country size, geographical features, etc.), and, hence, our identifying statistical variation stems from comparing different locations of the same country (e.g., Medellin with Bogota or Miami with Nashville). Note that controlling for annual time dummies picks up the world trade openness measure (which takes the same value for each country and varies annually), which, hence, is dropped.

The results are displayed in Table 2. Consider the main specification of col. 1, where the linear effect of proximity has a statistically significant positive coefficient, whereas its interaction with world trade openness has the expected negative sign. This means that strategic territories face, on average, a higher conflict risk in periods of low trade openness, while with greater trade openness, they are relatively more shielded from armed conflict, which is fully consistent with our game-theoretic model in *SI Appendix*. This result carries over for subcategories of conflict (col. 2–4) and for a conflict intensity variable (col. 5). The results of Table 2 are represented graphically in Fig. 3.

The impact is quantitatively sizable, as moving one SD (1,100 km) closer to a choke point increases by 0.4 percentage points[‖] (24.8% of the unconditional baseline risk) the conflict likelihood in periods when trade openness is low (0.4), while reducing it by 0.2 percentage points[**] (12.1% of the conflict baseline risk) when trade openness is high (0.6).

In *SI Appendix*, we present the details of all specifications used in the main text, in addition to results for alternative specifications. In particular, we go one step further by running the same regression, but including controls for cell fixed effects. These

[‖]Computation based on model (1) in Table 2: $(0.0148 - 0.0277 \times 0.4) = 0.00372$.

[**]Computation based on model (1) in Table 2: $(0.0148 - 0.0277 \times 0.6) = -0.00182$.

https://doi.org/10.1073/pnas.2105624118

Table 2. Regression analysis of the impact of maritime choke point proximity and world trade openness on violent events

	(1)	(2)	(3)	(4)	(5)
	Any violence	State-based	Nonstate	One-sided	ln(deaths + 1)
Proximity	0.0148***	0.0052***	0.0017***	0.0079***	0.0338***
	(0.0010)	(0.0006)	(0.0003)	(0.0006)	(0.0032)
Proximity×	−0.0277***	−0.0087***	−0.0034***	−0.0156***	−0.0711***
World trade open.	(0.008)	(0.0011)	(0.0006)	(0.0010)	(0.0053)
Observations	1,944,540	1,944,540	1,944,540	1,944,540	1,944,540
Adjusted R^2	0.110	0.078	0.025	0.054	0.100
Mean dep. var.	0.015	0.007	0.002	0.006	0.035
Latitude FE	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes

LPM estimates for model from (1) to (4) and OLS for model (5). Dep. var., dependent variable; FE, fixed effects. ***$p < 0.01$. SEs clustered at the cell level. Proximity is minus the distance in SDs from the nearest choke point (one SD equals 1,100 km). World trade open. is the world trade (exports plus imports) as share of world GDP.

constant terms are specific to each cell of 0.5 × 0.5 decimal degrees (55 km × 55 km at the equator) and, hence, filter out all time-invariant characteristics of this very fine-grained local area. In particular, this controls for the potentially confounding impact of elevation, microclimate, sea access, ruggedness of terrain, river proximity, and historical road network, to name a few. This specification is described in detail in *SI Appendix*. It is shown that all our results go through in this demanding specification and that the interaction term of interest between the proximity to maritime choke points and world trade openness continues to have a statistically significant negative sign in all specifications.

Next, in *SI Appendix*, we perform further robustness checks. We start by setting up an alternative specification to estimate the direct effect of world trade openness. We find a conflict-reducing effect of trade, and the coefficient of our main interaction term of interest remains robust to this alternative specification. Next, we investigate whether the interaction of world trade openness and proximity does not pick up the role of other factors, such as global military tensions, demographic changes, or democratization. Our results prove robust to controlling for the interactions of the these variables with proximity to choke points. Furthermore, we explore a series of alternative ways of defining choke points and building our proximity measure (such as choke points without manmade shortcuts [Panama and Suez canals]).

A further robustness check carried out in *SI Appendix* is to allow for a nonlinear impact of proximity to choke points, running tercile and quartile regressions, as well as focusing on immediate proximity to choke points (top 5 percentile, equaling 200 kilometers). Similarly, in another sensitivity test, the proximity to the closest coast and an interaction between this proximity and world trade openness are included. Our results are robust to this change and highlight that using our complex proximity-to-choke-points measure yields substantial additional explanatory power beyond the simple proximity-to-coast measure.

Finally, the robustness analysis in *SI Appendix* shows that the results are robust to using an alternative data source

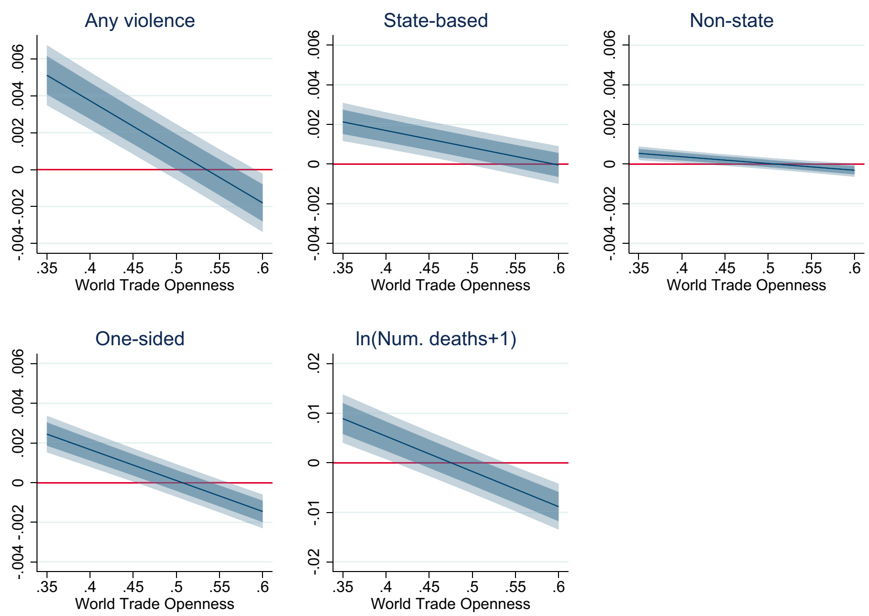

Fig. 3. Marginal effects of moving toward a choke point by one SD (1,100 km). Marginal effects were computed by using the coefficients from Table 2. The dark and light shades of blue represent, respectively, the 90% and 99% CIs. World trade openness is total world trade (imports plus exports) as share of the world GDP (World Bank Data).

for conflict [GDELT (20)] and to alternative clustering of SEs (at the country level, administrative level 1, or spatial clustering).

Last, but not least, in *SI Appendix*, we present a substantial extension of our statistical model, going beyond a simple robustness check. Specifically, we augment our specification by including an interaction between our proximity-to-chokepoints measure and a dummy for defense-cooperation agreements. This model shows that our main specification is robust to this inclusion and that having a defense-cooperation agreement is a complement to trade in terms of security, yet with a somewhat smaller effect. This highlights the usefulness of both informal trade incentives and formal defense-cooperation agreements for fostering peace close to strategic choke points.

Discussion

Our results suggest that—as predicted by our game-theoretic model—being located nearby maritime choke points is a mixed blessing. Being close to such a strait or bottleneck usually bears significant risks, as controlling such neuralgic locations conveys a series of rents and benefits. At the same time, in periods of high globalization and booming world trade, influential major powers have strong incentives to mediate local conflicts in order to guarantee the smooth operation of crucial waterways. We indeed find in our data that while, overall, places closer to choke points had more conflict, this reverses when world trade flows are large enough. Thus, while globalization may be responsible for some ills, it would be unfair to blame it for military combat over the control of locations of high strategic importance.

On a more general level, our findings are consistent with the view that global security coordination to mediate local disputes is a global public good that may be underprovided. Local fighting over controlling waterway bottlenecks creates a series of negative externalities worldwide (see, e.g., ref. 21). It is key to step up international coordination to ensure that disputes get mediated on a more regular basis, and not just when it is lucrative for major powers to do so. As stressed in the seminal work of ref. 22, collective action problems can be solved if one contributor (in our case, a major power or a military alliance such as NATO) has large enough incentives to provide a public good (in our context, free and safe access to global waterways). However, relying on this is often inefficient, as there are lots of situations where no single contributor has high-powered enough incentives to step up efforts, but collectively, all states would benefit from the provision of the global public good. Avoiding "free riding" and solving collective action problems are classic challenges studied in economics—in our context, a natural solution could be an increased role for supranational organizations, such as the United Nations, in guaranteeing free and safe maritime transport.

Data Availability. Openly available data have been deposited in the Harvard Dataverse (23).

ACKNOWLEDGMENTS. D.R. was supported by European Research Council Starting Grant POLICIES FOR PEACE-677 595.

1. V. I. Lenin, *Imperialism: The Highest Stage of Capitalism* (Resistance Books, London, 1999).
2. C. De Montesquieu, *Montesquieu: The Spirit of the Laws* (Cambridge University Press, Cambridge, UK, 1989).
3. N. Angell, *The Great Illusion* (Cosimo, Inc., New York, 2010).
4. E. Gartzke, The capitalist peace. *Am. J. Pol. Sci.* **51**, 166–191 (2007).
5. P. Martin, T. Mayer, M. Thoenig, Make trade not war? *Rev. Econ. Stud.* **75**, 865–900 (2008).
6. D. Rohner, M. Thoenig, F. Zilibotti, War signals: A theory of trade, trust, and conflict. *Rev. Econ. Stud.* **80**, 1114–1147 (2013).
7. S. W. Polachek, Conflict and trade. *J. Conflict Resolut.* **24**, 55–78 (1980).
8. M. O. Jackson, S. Nei, Networks of military alliances, wars, and international trade. *Proc. Natl. Acad. Sci. U.S.A.* **112**, 15277–15284 (2015).
9. P. Martin, T. Mayer, M. Thoenig, Civil wars and international trade. *J. Eur. Econ. Assoc.* **6**, 541–550 (2008).
10. G. Battiston, M. Bizzarri, R. Franceschin, Third party interest, resource value, and the likelihood of conflict (2020). http://hdl.handle.net/11565/4035697. Accessed 10 September 2021.
11. D. Rohner, M. Thoenig, The elusive peace dividend of development policy: From war traps to macro-complementarities. *Annu. Rev. Econ.* **13**, 111–131 (2021).
12. H. Buhaug, S. Gates, The geography of civil war. *J. Peace Res.* **39**, 417–433 (2002).
13. H. Buhaug, J. K. Rød, Local determinants of African civil wars, 1970–2 001. *Polit. Geogr.* **25**, 315–335 (2006).
14. P. Collier, A. Hoeffler, D. Rohner, Beyond greed and grievance: Feasibility and civil war. *Oxf. Econ. Pap.* **61**, 1–27 (2009).
15. N. Berman, M. Couttenier, D. Rohner, M. Thoenig, This mine is mine! how minerals fuel conflicts in Africa. *Am. Econ. Rev.* **107**, 1564–1610 (2017).
16. M. Harari, E. La Ferrara, Conflict, climate, and cells: A disaggregated analysis. *Rev. Econ. Stat.* **100**, 594–608 (2018).
17. U. J. Eberle, J. V. Henderson, D. Rohner, K. Schmidheiny, Ethnolinguistic diversity and urban agglomeration. *Proc. Natl. Acad. Sci. U.S.A.* **117**, 16250–16257 (2020).
18. World Bank, Trade (pct. of GDP) from national accounts data and OECD national accounts data files (2019). https://data.worldbank.org/indicator/NE.TRD.GNFS.ZS. Accessed 22 January 2020.
19. R. Sundberg, E. Melander, Introducing the UCDP georeferenced event dataset. *J. Peace Res.* **50**, 523–532 (2013).
20. K. Leetaru, P. A. Schrodt, "GDELT: Global data on events, location, and tone, 1979–2 012" in *ISA Annual Convention* (2013), vol. 2, pp. 1–49.
21. T. Besley, T. Fetzer, H. Mueller, The welfare cost of lawlessness: Evidence from Somali piracy. *J. Eur. Econ. Assoc.* **13**, 203–239 (2015).
22. M. Olson, *The Logic of Collective Action: Public Goods and the Theory of Groups, Second Printing with a New Preface and Appendix* (Harvard University Press, Cambridge, MA, 2009), vol. 124.
23. Q. Gallea, D. Rohner, Replication data for globalization mitigates the risk of conflict caused by strategic territory. Harvard Dataverse. https://doi.org/10.7910/DVN/P4RJBC. Deposited 9 September 2021.