Demographic Engineering and International Conflict: Evidence from China and the Former USSR

Lachlan McNamee* lmcnamee@stanford.edu

Anna Zhang* annazhang@stanford.edu

Forthcoming at *International Organization*

*Department of Political Science, Stanford University. We thank Avi Acharya, Lisa Blaydes, Jim Fearon, Jackelyn Hwang, David Laitin, Jeremy Weinstein, Jean Oi, Jonathan Rodden, Aliya Saperstein, Ken Scheve, Ken Schultz, Mike Tomz, Songying Fang, Scott Newman, Hans Lueders and participants in the 2017 Midwest Political Science Association conference, the 2017 Australian Quantitative Political Science Conference, the Stanford China Social Sciences Workshop, Stanford International Relations Workshop, Stanford Migration Ethnicity Race and Nation Workshop, the Higher School of Economics, the 2018 Pacific International Politics Conference and the 2018 International Political Science Association Annual Meeting for valuable comments.

Abstract

When and where do states seek to coercively alter their internal demography? This paper builds a theory that predicts under what conditions conflict induces states to alter the demographic "facts on the ground" by resettling and expelling ethno-national populations. We predict that, under particular scope conditions, states will employ demographic engineering to shore up control over (i) non-natural frontiers, and (ii) areas populated by ethnic minorities who are co-ethnics with elites in a hostile power. We then substantiate our predictions using new sub-national data on the incidence of demographic engineering from both China and the USSR. Causally identifying the spatially differential effect of international conflict on demographic engineering via a difference-in-differences design, we find that the Sino-Soviet split (1959-1982) led to a disproportionate increase in the expulsion of ethnic Russians and resettlement of ethnic Han in Chinese border areas lacking a natural border with the USSR, and that resettlement was targeted at areas populated by ethnic Russians. On the Soviet side, we similarly find that the Sino-Soviet split led to a significant increase in expulsion of Chinese and the resettlement of Russians in border areas, and that resettlement was targeted at areas populated by more Chinese. This paper thereby develops the nascent field of political demography by advancing our theoretical and empirical understanding of *when, where* and *to whom* states would seek to effect demographic change. Moreover, by demonstrating that both ethnic group concentration and dispersion across borders are endogenous to international conflict, our results complicate a large and influential literature linking ethnic demography to conflict.

Key words: State Building, Borders, Demographic Engineering, Ethnic Conflict, State-Sponsored Resettlement, Forced Migration, Expulsion, Second Image Reversed, Difference-in-Differences

Introduction

Since late August 2017, Burma has engaged in a renewed campaign of violence against its Rohingya minority. After attacks from secessionist Rohingya insurgents in Bangladesh, Burmese soldiers have burned hundreds of villages in Rakhine state near the Bangladeshi border and induced over half a million Rohingya to flee.[1] If recent history is any guide, burnt lands are likely to become new 'model villages' exclusively populated by resettled Buddhists from Bangladesh and elsewhere in Burma (Human Rights Watch, 2000).

The state-sponsored resettlement and expulsion[2] of peoples in order to alter the ethno-national composition of a region – a phenomenon this paper defines as demographic engineering – is by no means a phenomenon limited to Burma. Scholars have documented a diverse number of cases in which states have sought to engage in state-building through demographic engineering (e.g. Lustick 1993; Bookman 1997; McGarry 1998; Banister 2001; Haklai and Loizides 2015). Insofar as population movement shapes the geographic distribution of allegiant ethno-national groups, demographic engineering can alter the validity of a state's territorial claims and its effective territorial control. In essence, rather than have its territorial borders reflect the distribution of ethno-national groups, demographic engineering can ensure that the distribution of ethno-national groups reflect a state's desired territorial borders.

---

[1] Estimate provided by Human Rights Watch as of mid-October 2017 https://www.hrw.org/blog-feed/rohingya-crisis accessed 10/13/2017

[2] We use the term expulsion rather than forced migration to focus analytical attention on state-sponsored demographic change as forced migration is an umbrella term encompassing a broad range of phenomena including forced expulsions, people trafficking, development-induced displacment, and refugee flows driven by political persecution and conflict — much of which is beyond the scope of this analysis (Castles, 2003; Moore and Shellman, 2004).

Yet, for every observed instance of demographic engineering, there are equally many if not more instances where demographic engineering did *not* occur. Not all states engage in demographic engineering and even those that do are strategic and selective in deciding *where*, *when* and to *whom* they seek to alter the demographic "facts on the ground". For example, Thailand only sought to resettle Thai Buddhists to Malay areas after the 1950s and its resettlement program has been limited to its four southernmost provinces (Yegar, 2002); England only in the late 16th century sought to secure control over Ireland through resettlement and, even then, demographic engineering was limited to Ireland rather than English-controlled areas of Scotland or Wales (Gregory et al., 2013); likewise, puzzlingly, despite clashes with India over the Tibetan border in the 1960s and mass resettlement to other border areas of China over the same period, Han resettlement to Tibet was tightly restricted during the Mao era (Ma 2011, p.68);[3] even in the extreme case of Burma, it is clear from satellite maps that, despite ethnic Rohingya being present across Rakhine state, the incidence of village burning has been almost entirely concentrated in a low lying strip along the southern Burma-Bangladesh border (Planet Labs, 2017).

In short, whilst it is well-understood that demographic engineering *can* occur, our understanding of state-sponsored demographic change is nonetheless characterized by analytical gaps. Why do only certain states seem to engage in demographic engineering and why then only at certain periods of time? Why do such states target particular minorities and not others? Finally, why are some areas targeted for demographic engineering and not others? In short, what ac-

[3] Indeed, the proportion of Tibetans in Tibet between the 1964 and 1982 censuses dropped only 1.9% from 96.6 to 94.7%. Recent growing Han predominance in Tibet has instead largely been driven by employment in the tourism industry since the 1990s (Ma 2011, p.52).

counts for the substantial variation in the incidence of demographic engineering both over time and space?

This paper provides new theory and evidence that can help answer these important and understudied questions. Seeking to integrate the insights of Mylonas (2012) into the timing of minority political exclusion and recent work in international relations on the spatially strategic dimension of international conflict (e.g. Carter 2010; Goemans and Schultz 2016), we develop a theory of how the strategic dynamics of territorial conflict account for the spatio-temporal incidence of demographic engineering. In the absence of open war, states have historically sought to undermine their rivals by supporting insurgencies among cross-border co-ethnics (Gleditsch, Salehyan and Schultz, 2008; Salehyan, 2009; Lee, 2018). By expelling so-called 'fifth column' minorities and reducing their concentration in contested frontiers through an influx of ethnically distinct settlers, demographic engineering can forestall secessionist mobilization and cross-border insurgencies. However, not all frontiers are alike. Natural borders - which we define as those that are difficult to traverse due to the presence of geographic partitions such as mountain ranges or large bodies of water - independently act as obstacles to external attack and unregulated flows of personnel, propaganda and equipment (Pounds, 1972; Keegan, 1993; Kitamura and Lagerlöf, 2015). We therefore contend that, as a strategic response to territorial conflict, that demographic engineering will be disproportionately employed by states to shore up control over their most vulnerable frontiers -

those that lack natural boundaries and which are populated by ethnic minorities who are co-ethnics with the elites of a hostile power.[4]

Of course, not all states engage in demographic engineering. The scope conditions for our theory are states that (i) have a majority ethnic group inhabiting a core region and an ethnically distinct periphery, and (ii) inhabit a regional system in which territorial borders are contested and potentially dynamic. We then provide quantitative evidence that substantiate our theoretical predictions in the context of two important countries that do satisfy these scope conditions - China and the Soviet Union (USSR) during the second half of the 20th century. Both China and the USSR sought to undermine each other's respective control over frontier areas during the Sino-Soviet split (1959-1982) and both states engaged in a number of resettlement programs and coercive expulsions that substantially altered their ethnic demography over this period. In addition, the Sino-Soviet split can be plausibly considered a discontinuous break in international relations between two contiguous states. We exploit the break in relations between the USSR and China in 1959 and use a difference-in-difference design to cleanly test our theoretical predictions about the incidence of state-sponsored demographic change.

Our difference-in-difference results indicate that the breakdown of Sino-Soviet relations led to the resettlement of extra 300,000 persons and a 40% additional increase in the percentage of ethnic Han in each Chinese province

[4] These insights help resolve the earlier puzzles: Irish Catholics were viewed as allied to Catholic Spain in the wars between England and Spain in the late 1500s and so were targeted for expulsion and resettlement; Malays in southern Thailand were seen as receiving secessionist support from elites in newly independent Malaysia after the 1950s; Tibet, whilst contested, has never had a cross-border insurgency due to the largely impassable Himalayas; and northern Rakhine state is also largely mountainous so cross-border activity has been concentrated in the low-lying southern Burma/Bangladesh border.

bordering the USSR. Examining more fine-grained data on all demographic change in the contested province of Xinjiang since 1952, we find that Han settlement during the Sino-Soviet split was particularly targeted at those counties in Xinjiang populated by Russians and lacking a natural border with the USSR. We further find that the Sino-Soviet split led to the expulsion of a substantial proportion of the ethnic Russian population of Xinjiang, and that this drop was most significant in Xinjiang counties lacking a natural border with the USSR. On the Soviet side of the border, our difference-in-difference estimates similarly indicate that demographic engineering during the Sino-Soviet split was targeted at border areas and those populated by more Chinese. These results together substantiate our core theoretical predictions regarding the spatio-temporal incidence of demographic engineering.

This paper therefore advances the literature on a number of fronts. Theoretically, this paper develops the nascent and neglected field of political demography (Weiner and Russell, 2001; Teitelbaum, 2015). By bringing the state back into the study of sub-national demographic change, we advance our analytical understanding of *where*, *when* and *to whom* mass resettlement or forced expulsions are particularly likely to occur. Empirically, by exploiting a break in relations between two contiguous states and measuring its effects on sub-national demography via a difference-in-difference design, we provide the first well-identified evidence for the conditions under which states use demographic engineering. Finally, by endogenizing the distribution of ethno-national groups to international relations, we complicate a large literature linking partitioned or concentrated ethnic groups to the diffusion of conflict (e.g. Toft 2003; Weidmann 2009; Salehyan 2009; Cederman, Girardin and Gleditsch 2009; Buhaug

and Gleditsch 2008; Cederman et al. 2013; Rød 2009; Moscona, Nunn and Robinson 2017). Our results suggest that both the presence of partitioned ethnic groups and ethnic group concentration are endogenous to past international conflict and the incidence of demographic engineering, indicating that existing findings using ethnic demography as an independent variable may be confounded by omitted variable bias. As such, we caution against the current tendency in quantitative work to implicitly treat the distribution of ethnic groups as exogenous. We conclude by arguing that there is great scope for further work that can allow us to better understand the multifaceted relationship between state-building, conflict, and ethnicity.

Literature Review

The importance of territorial borders has long been recognized by scholars of international relations. Borders are institutions that have emerged to allow states to co-ordinate territorial claims (Simmons, 2005; Goemans, 2006; Carter and Poast, 2015; Acharya and Lee, 2017).[5] Yet, scholars have only relatively recently paid closer attention to the process whereby borders are consolidated by states.

On the one hand, border consolidation has been shown to be a function of a dyadic process of inter-state bargaining and conflict over formal territorial claims. Huth (1998) found that the strategic value of a territory as well as shared

[5] Dispute over the location of borders has moreover been shown to be a leading cause of international conflict (Vasquez, 1993; Kocs, 1995; Vasquez and Henehan, 2001; Senese, 2005; Vasquez, 1995; Gibler, 2012). Historical territory may have a particularly indivisible quality, giving rise to bargaining failure (Fearon, 1995; Toft, 2003; Fang and Li, 2016).

language and ethnicity between the populations of a target and challenger state predict territorial dispute initiation and Fravel (2008) finds that domestic unrest in China predicts external compromise over contested border claims. The character of the border has been shown to be important in this bargaining process. Goemans (2006) suggest that natural boundaries are more stable because they allow for co-ordination, Abramson and Carter (2016) more recently find that competing border precedents predict the emergence of territorial claims in Europe, and Goemans and Schultz (2016) find that border segments that follow non-natural boundaries and that partition politically powerful ethnic groups are the most likely to be formally challenged in sub-Saharan Africa.

Yet, on the other hand the development of stable borders can also be a function of unilateral decision-making by states. Hostile states can seek to undermine the territorial control of their competitors through facilitating insurgencies and illicit cross-border flows of propaganda, arms and personnel (Lee, 2018). To shore up contested frontiers, states can undertake a variety of unilateral measures (Carter, 2010). In particular, it has long been theorized that states can unilaterally consolidate territory by altering the demographic 'facts on the ground'. Through forced expulsions, states can remove from the frontier populations that can potentially aid a challenger and thereby forestall cross-border insurgencies. Moreover, populating a frontier with co-ethnics and expelling minorities allows states to rapidly consolidate control over contested territory (Lustick, 1993; Haklai and Loizides, 2015).

The literature on the connection between state-sponsored demographic change and territorial conflict has nevertheless been characterized by empirical and theoretical challenges. Theoretically, whilst we know that states *can* engage in

demographic engineering to consolidate contested territory, we have less understanding of the conditions under which this is particularly likely to occur. As a notable exception, Mylonas (2012) has advanced our understanding of the timing of demographic engineering. The central motivating assumption in Mylonas (2012) is that elites in the age of nationalism are driven by a 'homogenizing imperative', and that 'nation-building is not considered complete until there are no threatening non-core groups within their state' (p.24). As such, Mylonas predicts that when geopolitical relations between states sour, threatening fifth column ethnic groups supported by hostile power will be expelled or coercively assimilated through internal colonization.

We build on Mylonas' insights into the timing of minority exclusion to offer a more general theory for understanding when, where and why demographic engineering occurs. We specifically relax the assumption that elites are driven by a homogenizing national imperative and instead follow Carter (2010) by understanding demographic engineering as a state-building strategy deployed to consolidate territory. This perspective can offer broader analytical leverage because, as Lee (1978) compellingly details, demographic engineering has been undertaken by states such as China in newly conquered territories prior to the age of nationalism - whether by the Qin, Ming or Qing dynasties.[6] Moreover, demographic engineering has historically tended to occur alongside and as a complement to a broader project of territorial consolidation. For example, in addition to currently expelling the Rohingya and resettling Buddhists,

[6] To be sure, one should be careful not to invalidly project modern notions of ethnicity back in time. But premodern societies were also informed by notions of different 'peoples' based on language/religion/pastoralism - for example, the Qing banner system of Manchus, Mongols and Han - which defined stereotypical state loyalties and so the incidence of demographic engineering.

the Burmese state has recently fortified its border with Bangladesh with a new fence, an influx of security forces and land mines.[7] Probing the strategic dynamics of territorial conflict will hence offer insight into not just when but *where* states engage in coercive territorial consolidation more generally and demographic engineering specifically.

Empirically, analyses of demographic engineering have tended to be characterized by the dual challenges of data collection and causal identification. Given the paucity of historical sub-national demographic data, analyses of demographic engineering have tended to be limited to case typologies (e.g. McGarry 1998; Bookman 1997; Morland 2014), focused analyses of a small number of cases (e.g. Hazarika 2001; Natali 2015; Lustick 1993; Martin 2001; Banister 2001; Bleuer 2012; Han and Mylonas 2014) or cross-country regressions using binary indicators (e.g. Huth 1998; Carter 2010; Mylonas 2012; Bulutgil 2016). In order to uncover otherwise hidden spatio-temporal dynamics structuring the incidence of demographic engineering, however, it is essential that we move to a more disaggregated level of analysis that can measure the direction and timing of state-sponsored demographic change in a more systematic way.[8] Moreover, most individual cases are overdetermined because forced expulsions and state-sponsored resettlement be undertaken for a number of geopolitically-unrelated reasons including to reduce perceived over-population in urban areas, secure natural resources or to develop sparsely populated lands for modern

[7] Similarly, Carter (2010) details how the expulsion of ethnic Chinese in Vietnam in the late 1970s occurred alongside a broader project of extensive border defense installations.

[8] Systematic data collection picks up the many cases in which demographic engineering did not occur whilst geographic disaggregation can uncover theoretical predictors otherwise concealed in dyadic or group-baed analyses (Schultz, 2017)

agriculture (Fearon and Laitin, 2011; Albertus, 2015). As such, to credibly identify the connection between territorial conflict and state-sponsored demographic change, we require an empirical strategy that can exploit a plausibly exogenous increase in territorial conflict and measure its effects using a panel of sub-national ethnic demographic change. This paper does precisely this by compiling new sub-national data and exploiting the break in relations between China and the USSR over the Sino-Soviet split (1959-1982) to credibly test a number of theoretical hypotheses relating the dynamics of territorial conflict and state-sponsored demographic change.

Theory

Why is demographic engineering an effective strategy for states to consolidate territory? Firstly, by changing the demographic "facts on the ground" through the expulsion of non-nationals or the resettlement of co-nationals, states can extend their claim to contested territory by making dyadic border changes more difficult. Jurisdiction over population rather than over territory defined the limits of states in Europe until the 1648 Treaty of Westphalia (Sahlins, 1989). Moreover, state boundaries in the era of national self-determination are shaped by the territorial extent of socially constructed national communities (Anderson, 1983). Insofar as population movement shapes the geographic distribution of allegiant groups, demographic engineering can calcify territorial borders by engendering ethno-national homogenization along a contested frontier (Lustick, 1993; Bookman, 1997; McGarry, 1998; Morland, 2014; Haklai and Loizides, 2015).

Secondly, demographic engineering can consolidate territorial borders by effectively forestalling cross-border insurgencies and minority secessionism. A large literature has shown that more concentrated minority groups are a higher risk of engaging in civil conflict (e.g. Horowitz 1985; Cornell 2002; Toft 2003) and Weidmann (2009) finds that a key intervening mechanism is that concentration facilitates minority collective action. Moreover, partitioned ethnic minorities are particularly at risk of engaging in secessionist conflicts due to the funding, territory and arms provided by cross-border kin (Salehyan, 2009; Cederman et al., 2013). By reducing minority concentration in general and the dominance of partitioned minorities in vulnerable border zones, demographic engineering can impede successful minority collective action and cross-border insurgencies.

Yet, instead of populating a frontier with new settlers, states could instead try to extend their effective control by garnering the loyalty of indigenous populations. One important reason why states would seek to demographically engineer frontier regions rather than facilitate assimilation is related to the dynamics of territorial conflict. States in low-information conflictual contexts use ethnic identifiers to assess the likely political loyalties of populations (Blaydes, Forthcoming). Ethnic minorities who are co-ethnics with politically powerful elites in a foreign power are viewed as 'fifth columns' allied to a hostile foreign power and are thus targeted for repression rather than assimilation (Mylonas, 2012; Han and Mylonas, 2014; Bulutgil, 2016). Moreover, assimilation usually requires a substantial period of time and is thus an ill-suited strategy to pursue in response to rising conflict. The expulsion of an ethnic minority and the demographic dilution of its lands with new settlers is therefore likely to simul-

taneously occur to minorities who are co-ethnics with elites in a hostile foreign power.[9]

However, in all but the most extreme cases, not all members of a minority are generally targeted for expulsion and not all lands along a border are targeted for resettlement. Given the spatially strategic dimension to territorial conflict, the incidence of demographic engineering should vary not only by ethnicity but also by space. States can undermine their rivals by facilitating the systematic violation of their border by non-state actors seeking to secede from or overthrow the government of a rival state (Gleditsch, Salehyan and Schultz, 2008; Salehyan, 2009) and so hostile neighbours tend to weaken the territorial reach of the state (Lee, 2018). As a remedial response, we expect demographic engineering to be particularly prevalent in border zones between hostile states.

Moreover, we theorize that border segments that follow natural boundaries - those that are difficult to traverse due to the presence of geographic partitions such as mountain ranges or large bodies of water - are less likely to be the site of demographic engineering.[10] To be sure, the notion that state borders based on geographic partitions are more 'natural' than other borders has a long and problematic intellectual heritage that can be traced back to the age of nationalism and the supposedly *limites naturelles* of the French state. Political geographers

[9] This theoretical prediction differs from Mylonas (2012) because Mylonas theorizes forced migration and internal colonization as *substitute* strategies for either excluding or assimilating a fifth column ethnic group into the nation. Given that expulsions and internal resettlement both dilute the demographic dominance of a fifth column in a territory, however, our state-building framework predicts that they are rather *complementary* strategies for consolidating contested territory.

[10] See Pounds (1972) and Fall (2010) for a survey of the intellectual history of distinguishing between natural and non-natural borders based on whether or not they follow topographical features. This geographic conception of 'natural' borders differs from conceptions of natural borders as based on national or ethnic settlement patterns (e.g. Alesina, Easterly and Matuszeski 2011)

have recently downplayed the notion that nature structures political boundaries. For example, Fall (2010) is critical of distinctions between natural and 'artificial' borders in economics and political science, reminding us that "any classification that claims to be natural can only be the result of arbitrary imposition reflecting pre-existing relations of power" (p.144). As such, we should indeed be skeptical of claims that some borders are more 'focal' or better reflect the distribution of pre-existing ethno-national groups — even in the canonical case of the Pyrenees, it is far from clear that there is anything particularly focal or pre-determined about a border delimited to follow a particular mountain ridge in a large mountain range and contemporary national divisions either side of the Pyrenees were the *product* of the French and Spanish border delimitation (Sahlins, 1989).

Yet, whilst cognizant that all social boundaries are constructed by humans and are thus non-natural in some basic sense, we must allow analytical space for the strategic role that geography plays in military conflict. As Keegan (1993)'s magisterial *A History of Warfare* details, all skilled military tacticians throughout history have necessarily taken into account terrain and climate in warfare. Specifically, borders delimited to follow mountain ranges or large bodies of water are easier to defend from aggressors (Pounds, 1972). As such, divisions between states tend not to be located randomly. Rather, geographic regions with large rivers and mountain ranges such as the European Alps or the Asian Himalayas are particularly likely to be divided between a large number of states because the presence of geographic divisions in part makes it less likely that any single state could militarily absorb all of their regional competitors (Kitamura and Lagerlöf, 2015).

For this reason, we propose that state borders that follow geographic features should above all be understood as *strategically* distinct from 'non-natural' borders. Natural borders present geographic obstacles to communication, trade and transport between states and as such can bolster the stability of borders by both forestalling unregulated cross-border insurgencies and by reducing the likelihood of a successful external attack.[11]

As demographic engineering is a response to territorial weakness, we therefore expect it to be particularly extreme in areas where a state's territorial control is most vulnerable to challenge from external actors - non-natural border zones and those populated by fifth column ethnic minorities. In short, the *timing* of demographic engineering in border zones is shaped by the onset of hostile relations between two contiguous states whilst the *location* of demographic engineering is shaped by the location of politically influential partitioned ethnic groups and non-natural borders. The two-by-two tables corresponding to our theoretical predictions are presented in Tables 1 and 2.

Table 1: Geographic conditions predicting the likelihood of demographic engineering

Conditions	*Non-Natural Border*	*Natural Border*
Hostile Relations	High	Low
Non-Hostile Relations	None	None

[11] In this sense, whilst we use the term natural and non-natural borders to refer to an ideal type distinction, the naturalness of a border should be considered a continuous function of the ease of its crossing. Specifically, given the greater difficulty of crossing mountains relative to rivers, mountain borders should therefore be considered more 'natural' than river borders and higher mountains more 'natural' than lower ones.

Table 2: Ethnicity conditions predicting the likelihood of demographic engineering

Conditions	*Non-Natural Border*	*Natural Border*
Fifth Column Minority	High	Low
Non-Fifth Column Minority	None	None

In other words, we hypothesize that:

Hypothesis 1 (H1). *States will target demographic engineering at border zones contiguous with a hostile foreign power.*

Hypothesis 2 (H2). *States will target demographic engineering at minorities who are co-ethnics with elites in a hostile power rather than other minorities.*

Hypothesis 3 (H3). *States will disproportionately target demographic engineering at non-natural border areas with a hostile power.*

An alternative hypothesis is that, rather than shore up non-natural frontiers with the advent of hostile relations, states would instead seek to shore up control over areas characterized by formal border disputes. Whilst it is certainly the case that unresolved territorial claims may worsen tensions between countries (Schultz, 2014), as Schultz (2017) demonstrates in the case of oil, geographic disaggregation of territorial disputes can reveal quite different conflict dynamics than dyadic regressions would suggest. In this respect, even if an unresolved territorial dispute led to a conflict between states, it is a separate theoretical question as to where states would target demographic engineering in response. We have theorized demographic engineering as a response not to dyadic territorial disputes *per se* but rather to the threat of cross-border and secessionist

insurgencies. Given that military vulnerability is unrelated to the age of a border or the presence of a formally disputed boundary, we do not expect that these factors play as important a role in structuring the spatial incidence of demographic engineering in border zones. As such, an anti-hypothesis to our theory is that:

Hypothesis 4 (H4). *Border areas with formally disputed boundaries are more likely than other border areas in a conflict to experience demographic engineering.*

We will now test our theoretical predictions in the context of demographic engineering in China and the USSR during the Sino-Soviet split (1959-1982). Beyond both being substantively important cases to understand in their own right, China and the USSR are also particularly apposite countries to study the incidence of state-sponsored demographic change as both countries satisfy two important scope conditions for our theory. First, China and the former USSR, like many countries in Asia, are characterized by a majority ethnic group inhabiting a core and a minority-dominated periphery. Unlike in much of the West where states are highly consolidated, the question of minority secessionism and state-building is thus a central policy concern.[12] Second, unlike in sub-Saharan Africa or Latin America, international borders were highly contested and dynamic in Asia during the 20th century (Herbst, 1990; Darden and

[12] Our theory, however, would be relevant for predicting the incidence of demographic engineering in Western states in the past such as the United States and Canada during the nineteenth century or weaker contemporary Western states such as Spain or Italy, where during the late 20th century both states sought to combat secessionism by increasing government investment in ethnically distinct peripheries to incentivze resettlement.

Mylonas, 2016).[13] Given that these two scope conditions are satisfied, we therefore see the recent history of China and the USSR as particularly fruitful sites to understand how states consolidate control over ethnically heterogeneous and contested frontiers.

Historical Context

In this section we provide historical context to the Sino-Soviet split (1959-1982), including a brief overview of the history of territorial conflict between China and Russia and their strategies of demographic engineering.

China's borders with Russia and the Central Asian states have almost all contracted since the late imperial era; the only boundary between Russia and China that has remained constant since 1820 is a small portion of the northern border running along the Argun river dividing Heilongjiang from Siberia. After a series of internal disturbances and military defeats in the 1800s, China progressively ceded a substantial amount of territory to Russia and Russian troops facilitated effective Mongolian independence from China in the early twentieth century. Supplementary Materials A provide further historical detail on the progressive development of the Sino-Russian border over this period.

At the time of Chinese Communist victory in 1949, the broad contours of the China-USSR border were thus fairly well-defined as a result of a series of treaties and protocols concluded over the prior century. However, the new Chi-

[13] This scope condition is a relevant factor with respect to state-building more generally (Tilly, 1990; Herbst, 1990) which can shape ethnic homogenization through mechanisms other than the movement of population - for example, as Darden and Mylonas (2016) compellingly argue, being located in a hostile regional system can engender ethno-linguistic homogenization through the provision of mass education.

nese Communist government cast uncertainty on the legitimacy of China's borders given that they were the result of 'unequal' treaties signed during a century of Chinese weakness. The first Chinese People's People's Political Consultative Conference had declared in 1949 that all past treaties signed by the Kuomintang would be examined with a view to potential re-negotiation - which included formal recognition of Mongolian independence. As such, frontiers clearly defined by past treaties were all potentially re-negotiable after 1949 and the subject of revanchist claims (An, 1973).[14] In addition, ambiguities and contradictions in past treaties rendered a large portion of the border between the USSR and China under dispute.

Tensions largely unrelated to territorial disputes, however, began to rise between the USSR and China throughout the late 1950s, culminating in the Sino-Soviet split of 1959 (Jian, 2006; Chen, 2010). The origins of the split can be traced back to both ideology and geopolitics. Mao forcefully disagreed with Nikita Khrushchev's "Secret Speech" of 1956 that vehemently denounced Stalin's cult of personality and with Khrushchev's general policy of "peaceful co-existence" with the United States (Johnston, 1995). Beyond these more abstract ideological differences, USSR and Chinese geopolitical interests also began to diverge in the late 1950s. The USSR continued to seek a warm water port on the Pacific and Khrushchev proposed the construction of a joint submarine flotilla and long-wave radio transmitter on Chinese territory in 1958. This proposal was roundly rebuffed by Mao who saw it as evidence of the return of historical Soviet designs on Chinese territory and a form of 'red imperialism'.

[14] Ultimately, a few years after the Sino-Soviet split began in 1963, Chinese state media outlets would indeed begin to publicly press claims to large swaths of historically Chinese territory in the USSR including the south-eastern area of Siberia, Vladivostok and Central Asia that had been ceded in the mid-nineteenth century.

Mao also continued to seek Taiwanese reunification via military force whereas the USSR, fearing nuclear war with the United States, was reluctant to commit forces in support of this endeavour. These strategic differences ultimately manifested in the Quemoy incident of 1958 when, without informing the USSR in advance, China began to shell the Taiwanese islands of Quemoy and Matsu, taking the USSR and the United States to the brink of nuclear war.

Trust between the USSR and China finally broke down completely in 1959. The USSR viewed the Quemoy incident as evidence that China could not be trusted with nuclear weapons and stopped providing nuclear assistance to China in June 1959. The USSR also took a neutral stance on the Sino-Indian border clashes of August-October 1959, causing much consternation in Beijing. In a historic and vitriolic October meeting between Khrushchev and top Chinese leaders, well known as the turning point in the Sino-Soviet split (Wich, 1980; Chen, 2010), USSR neutrality over the recent Sino-Indian clashes proved a hotly contested sticking point (Zubok, 1959). Whilst Western intelligence forces only became aware of the Sino-Soviet split in 1960 as the USSR publicly withdrew all her technical advisors from China, it is increasingly clear that 1959 represents the key year when Sino-Soviet relations broke down (Lüthi, 2010). As Jian (2006, 101) puts it, "the Sino-Indian dispute, and the beginning of the Sino-Soviet split combine to mark the year 1959 as one of unusual significance, a year in which a new and very different chapter in the global Cold War began to unfold."

Chinese domestic policy altered over 1959 to reflect heightened wariness of Soviet influence in China. This included banning the use of the Soviet Cyrillic

alphabet in 1959[15] and sealing the Xinjiang border from the USSR in 1959 in order to isolate its minorities from their Soviet clansmen (An, 1973, 72).[16] Moreover, as this paper will show, the central government sought to strengthen its control over border regions by engaging in expulsions of Russians and mass resettlement of Han to the frontier.

Many Chinese residents along the Soviet border had been Soviet citizens in the 1930s when central Chinese authority was absent and still retained personal and economic ties with co-ethnics across the border.[17] Mao feared that Soviet influence over ethnic minorities could be used to 'detach' border regions from China (Mao, 1974, 190-191). To better consolidate its territorial control, pressure was placed on the significant cohort of Soviet citizens in China, numbering over 100,000 in Xinjiang alone, to leave Chinese territory. USSR citizens in Xinjiang saw their property and other legal rights progressively curtailed over 1959 and a large number were abruptly dismissed from work in state enterprises (Ginsburgs, 1978, 70). As such, by the end of 1959 more than 88 percent of registered USSR citizens in Xinjiang had been repatriated (Fravel, 2008, 104).

At the same time, China began to escalate expulsions of Chinese nationals who it viewed as allegiant to the USSR. We empirically demonstrate in this paper that the Sino-Soviet split led to a significant reduction in Xinjiang's ethnically Russian minority. Qualitative evidence suggests that this reduction is

[15] The ban ultimately ended at the conclusion of the Sino-Soviet split in 1982 (Clarke, 2011).

[16] The Soviets also later charged that the Chinese side began to initiate hostile border incidents and skirmishes in 1959 (Robinson, 1972, 1177).

[17] The strategic issuance of passports was a strategy historically deployed by both Russia and Britain to consolidate territory in Central Asia in the late 19th and early 20th century, and so many elites in Xinjiang had Russian passports (Brophy, 2016).

most likely the result of expulsion of dual-nationals. According to the CCP Director of Foreign Affairs in Xinjiang, Deng Liqun, between 1954-1963, the total number of dual-national ethnic Russians forcibly repatriated to the Soviet Union ranged from 1,968 to 35,922, which corresponds to our estimate of a total 8,000 decline in the ethnic Russian population due to the Sino-Soviet split (Qi, 2002).[18]

Meanwhile, mass resettlement of Han Chinese labourers and farmers to frontier regions were underway. The strategy of diluting the dominance of non-Han individuals in border regions was colloquially called "mixing sand" (*chan shazi*). Mass migration was achieved through a number of government campaigns that implored Han youth to go and support China's borderlands and which emphasized the ethical and ideological virtues of those who "elected" to resettle. Many of these settlers both in Xinjiang, Yunnan and elsewhere in China were absorbed into state farms that functioned as independent political and social units (*danwei*). These state farms, run by paramilitary organizations such as the Xinjiang Production and Construction Corps (XPCC), had their own schools, medical services, and government structures, and were almost entirely segregated from the local population. Approximately 80 percent of Han migrants to Xinjiang over the Mao era were assigned to different units and enterprises of the XPCC (White, 1979).[19]

[18] According to Deng, the USSR consulate in Xinjiang initially refused to take in its dual-nationals, confirming China's suspicions that they were being used for espionage by the USSR.

[19] Mass Han settlement to these state farms was a central component of China's efforts to secure control over its border regions. The role of the XPCC in particular was to increase the number of Han in Xinjiang and act as a border control. Settlers originally signed a contract for three to four years of work but, after the collapse of Sino-Soviet relations, the settlers were assigned to Xinjiang permanently (White, 1979). The XPCC was regarded as a loyal bastion of Han power in Xinjiang that could be reliably called upon to pacify local unrest instigated by the Soviet Union. Internal intelligence documents from 1962 reveal that, whilst the People's Liberation Army

The focus of territorial threat and consequently XPCC settlement was Xinjiang's northern border with the USSR. Unlike the largely impassable Tian Shan mountains forming the southern border, the northern border, first defined in 1860 to connect existing Chinese sentry stations in low-lying pasture land, did not follow a natural boundary (Figure 1) and tended to be very lightly guarded (Fravel, 2008). Concerns about Soviet infiltration across the northern border in the late 1950s and early 1960s were widespread in official and academic sources in China (Dun and Zhang, 2014). Moreover, Soviet authorities were reportedly very active at taking advantage of the permeable northern border to facilitate cross-border personnel and propaganda flows from Soviet Kazakhstan. This included fomenting dissent in Xinjiang by broadcasting anti-Chinese radio messages from Alma-Ata and distributing material calling for the creation of an independent, pro-Soviet republic in Xinjiang. In response the Chinese government established a cordon sanitaire along the northern half of the Sino-Soviet border in Xinjiang in 1962 and allocated much of the borderland to the XPCC settlers.[20]

Yet, the early 1980s proved a watershed both for domestic policy in China and for Sino-Soviet relations. The election of Ronald Reagan in the United States in November 1981 prompted a strategic rethink in China and the USSR. Reagan's aggressive support of weapons sales to Taiwan, the mujahedeen in Afghanistan and the general reassertion of US military power abroad prompted

(PLA) was expected to engage USSR battalions in any future conflict, XPCC settlers were expected to form militias to pacify unrest among autochthonous minorities (Xinjiang, 1998).

[20] It specifically ordered the XPCC to systematically increase the number of state farms to form a "belt" of agriculture along the Xinjiang-Kazakhstan border in order to prevent cross-border personell flows and Soviet infiltration.

Figure 1: The province of Xinjiang, China and its natural and non-natural borders with the USSR

China and the USSR to take their first tentative steps toward reconciliation. Leonid Brezhnev offered an unprecedented conciliation to China in Tashkent in March 1982 when he stated that the USSR was "prepared to come to terms, without any preliminary conditions, on measures acceptable to both sides to improve Soviet-Chinese relations on the basis of mutual respect for each other's interests, non-interference in each other's affairs, and mutual benefit" and took care to underline that "there is no threat to the People's Republic of China from the Soviet Union" (Brezhnev, 1982). Extended negotiations between China and the USSR ensued over the rest of 1982. These talks culminated in an agreement at the end of 1982 that re-established cross-border trade and resumed Sino-

Soviet diplomatic relations at the vice-ministerial level. An intensely conflictual period in Sino-Soviet relations was, at last, over.

Data

Recall that in the theoretical section, we predicted that the *timing* of demographic engineering is shaped by the onset of hostile relations between two contiguous states whilst the *location* of demographic engineering is shaped by the location of politically influential partitioned ethnic groups and non-natural borders. As applied to our specific context of study in China and the USSR, the two ethnic groups of interest are the Han and Russians both of whom constituted the majority and politically dominant ethnic group in China and the USSR respectively. The Sino-Soviet split (1959-1982) constitutes the onset of hostile relations. Our hypotheses regarding natural and non-natural borders are tested by exploiting differences along the border in Xinjiang, half of which was originally delimited to connect historic Chinese sentry stations and the other half of which follows the main ridge of the impassable Tian Shan mountain range (Figure 1).

To test our hypotheses, we compiled novel panel datasets at both the provincial and county level in China. We primarily test our hypotheses in the context of China due to data availability; however, a later section will detail how similar patterns of demographic change can be observed in the former USSR. The Chinese province-year panel is an unbalanced panel of 29 provinces over 1949-1985 based on data from the *Zhonghua Renmin Gongheguo renkou tongji ziliao huibian 1949-1985* (Compilation of Population Statistics of the People's

Republic of China from 1949 to 1985). This data is based on historical official household registration information from the Ministry of Public Security and has been standardized to reflect 1985 provincial boundaries. In China, rural production brigades and urban public security officers report the size of their registered population to county and municipality governments, who then compile the data and report the totals upward to the prefectural and provincial level, where finally it is reported to and compiled at the national level at the end of each calendar year.

The major sources of error in this data are under-counting and double-counting (Banister, 1991). Because locality cadres are evaluated based on their ability to provide social services to their registered population only, it is not uncommon for individuals to spend long periods of time in unofficial status, as a locality under resource constraints may be reluctant to register a great number of new residents. Moreover, migrants who spend a substantial period of time in two localities in one year are sometimes double-counted by both localities, so net migration flows across provinces never quite cancel out. These measures exclude military personnel movements, temporary migrants and unofficial migrants. However, we can be reasonably assured that long-term unofficial interprovincial migration was negligible until the early 1980s because the absence of a market economy meant that unofficial migrants would have had no ability to live independently from the Chinese state.

Moreover, the fact that this data was published in the late 1980s, generally regarded as the most politically open period in modern Chinese history and a time when government manipulation of official population statistics was minimal (Banister, 1984; Li, 1985), means that these reported household registration

numbers constitute the best available data on historical population changes in China (Banister, 1991). Reflecting the political openness of the early reform period, the data in this source clearly reflect politically sensitive changes in population such as the precipitous rise in deaths during the Great Leap Forward and its migration estimates are consistent with flows based on both migrant census surveys (Liang and White, 1996) and decennial census data (Banister, 1991).

Our main dependent variables are yearly inward migration and the total population of each province. We primarily look at inward migration rather than net migration as net migration is also affected by outward migration flows which, as this paper shows, is shaped by geopolitical threat in other ways. We include total population as a dependent variable so we are able to capture changes to both stock and flows of population. We also constructed measures of province-year outward migration from this data source.

Our secondary source for the province-year panel is the China Statistical Data Compilation (1949-2003) created by the China Data Center at the University of Michigan. This data is based on information provided by the National Bureau of Statistics. From this data source, we constructed covariate measures of province-year education (number of primary schools), infrastructure development (length of highways) and economic development (real GDP and gross industrial output). Summary statistics for all these variables are available in Table 9 in the Appendix.

China has four provinces bordering the USSR - Jilin, Inner Mongolia, Xinjiang and Heilongjiang - and 25 provinces not bordering the USSR. A map of the provinces is provided in the Appendix (Figure A.8). We code the Sino-Soviet split as starting from 1959 when the alliance broke down in an acrimo-

nious meeting between Mao and Khrushchev in Beijing and ending at the end of 1982 when Brezhnev successfully resumed formal diplomatic ties and trade with China.

We are aware that one potential violation of the parallel trend assumption may come from spatially differential effects of the Great Leap Forward campaign (1958-62).[21] If the Great Leap hit the border provinces less hard than other provinces and fostered inward migration, then our estimates of the effect of changing geopolitical context in 1959-1982 may be confounded by famine-related migration. Despite this concern, the Great Leap Forward does not represent a plausible confounder for our analysis because famine-induced migrants were considered "vagrants" or "blind flow" (*mangliu*) by the Chinese government and were thus not counted as official migrants.[22] To control for any residual effects of the Great Leap, however, we also control for measures of province-year death rate, per capita grain production and per capita grain production growth that Meng, Qian and Yared (2015) recently constructed in their analysis of excess mortality during the Great Leap Forward. As a robustness check, we also show that there was a significant difference-in-differences in a *reduction* in provincial population and migration to the borderlands as the Sino-Soviet split ended in 1982, so dropping all years from the Great Leap Forward.

[21] The Great Leap Forward was a political campaign from 1958-1962 that organized rural households into collectivized communes. Poor incentives, unrealistic production targets and bad weather caused approximately 30 million deaths (Banister 1987, 114-118).

[22] The memoir of a southern Chinese intellectual, Li Wenshu, testifies to the difficulty of official registration with the local government in Inner Mongolia. Li described his migration to Inner Mongolia in 1961 as "truck hopping" and illegal trespassing. While he was originally convinced by some Hebei peasants that Inner Mongolia had "plenty of food" and was "lacking labourers" when Li arrived in the province, no official dared register his residency due to a central government order that prohibited the resettlement of any vagrant without a document. Li was ultimately forced to leave Inner Mongolia in 1962 (Li, 2017).

We would moreover emphasize that provincial heterogeneity during the Great Leap Forward is not a confounder for our results within the province of Xinjiang or within the USSR.

Finally, we measure provincial ethnic composition change using information from the Chinese census. We measure the proportion of Han Chinese by province in each of the 1953, 1982 and 1990 censuses.[23]

For the Xinjiang county-year panel, our data sources are the 1952 Population Statistics of Minorities in China and the Xinjiang Uighur Autonomous Region Statistical Yearbooks dating back to 1963.[24] Such data has not been compiled before and document politically sensitive changes in XPCC settlement and ethnic proportions in Xinjiang.[25] The data in the yearbooks are based on official household registration information from the Xinjiang Ministry of Public Security. The main outcomes of interest are the number of XPCC settlers, ethnic Russians and proportion of a county that is Han Chinese.

For every county (based on 1952 boundaries) in Xinjiang in every year between 1952-1985 to match the time frame of the provincial panel, we coded (i) average county population, (ii) number of Han Chinese, (iii) number of Uyghurs, (iv) number of Kazakhs, (v) number of Hui, (vi) number of Kyrgyz, (vii) number of Russians, (viii) the number of XPCC settlers. Some counties experienced border changes over time; however this was almost always the re-

[23] We do not include the 1964 Chinese census in our analysis as it was plagued by mismanagement and so tends to be excluded from statistical analyses (Li, 1985; Banister, 1991). Including 1964, however, does not change our results (see Supplementary Materials B.

[24] The pre-1963 Xinjiang yearbooks do not contain county-level data. As such, there is a nine-year gap in our Xinjiang county panel between 1953-1962.

[25] The yearbooks are available at the University of Washington; this is the only publicly available source for this data worldwide.

sult of a new county being created within an old county so it was relatively straightforward to match post-1952 county data to 1952 county boundaries.[26] This data, whilst having its limitations,[27] represent the best historical source on population changes in Xinjiang.

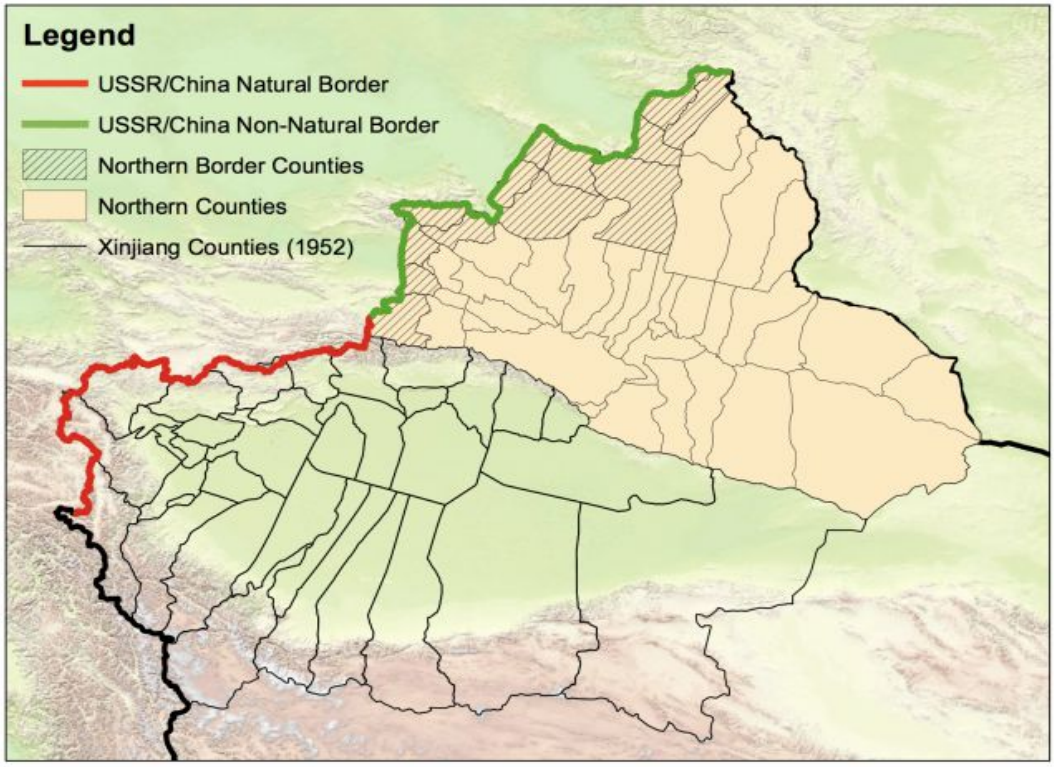

Figure 2: Xinjiang counties (1952) and measurement of proximity to a non-natural border with the USSR

[26] This is because new counties were created through subdivision. For example, county A would be subdivided into counties B and C in later years of the panel and then populations would be reported separately for counties B and C. By aggregating the populations of B and C, we can track population change across all the years of the data using county A's borders.

[27] Chief among which are that the data does not capture flows of military personnel or illegal/temporary migrants. There has been a significant increase in the unofficial 'floating' population of Xinjiang since the market reforms of the 1980s and Xinjiang's recent industrialization. As such, this data reflects only official, not unofficial, population flows.

We have included the two-by-two tables corresponding to the application of our general theoretical predictions to the Xinjiang case in the Appendix (Tables A.12-13). We specifically predict that the focus of state-sponsored demographic change would be particularly targeted at the areas of Xinjiang populated by ethnic Russians and where China has a non-natural border with the USSR. We coded natural borders as those that were delimited to follow the Tian Shan mountain range and non-natural borders as those that were originally delimited to follow historic Chinese sentry stations.[28] We have theorized the 'naturalness' of borders as a function not of focality but rather of the difficulty or ease of traversing a border. To ensure our results are not being driven by the dichotomization of natural and non-natural borders in Xinjiang and pick up the more continuous 'naturalness' of the border as a function of the difficulty of crossing, we also include specifications using a continuous measure of the 'naturalness' of the border measured by mean altitude.

We created three different measures of proximity to Xinjiang's non-natural northern border with the USSR. First, we created (i) a binary measure of whether a county is a northern border county, (ii) whether a county lies in northern Xinjiang, and (iii) the distance of all counties to Xinjiang's northern border with the USSR. Northern counties of Xinjiang lie in the Dzungarian Basin and southern counties in the Tarim Basin - the two are separated by a mountain range widely recognized as a politically significant divider between northern and southern Xinjiang (Figure 1).[29] Figure 2 illustrates these three measures in space. To

[28] Supplementary Material A provides further historical detail on the delimitation of the border.

[29] A common saying in contemporary Xinjiang is *BeiHan NanWei* i.e. that the north of Xinjiang is populated by Han and the south by Uyghurs. This paper explains how this patterning of ethnic demography originated as nothern and southern Xinjiang had similar percentages of Han in 1952 but, by the conclusion of the Sino-

the extent that all three of these measures predict an increase in Han and XPCC settlement and a reduction in the ethnically Russian population during the Sino-Soviet split, we can be assured that the Chinese state was particularly focused on consolidating its control over areas of Xinjiang lacking a natural border with the USSR.

Finally, to test **H**4 we created a binary measure of whether a county had a formally contested border with the USSR. As Supplementary Materials A details, the overlapping territorial claims between the USSR and China along the Xinjiang border as of the 1950s largely stemmed from ambiguities and contradictions in past treaty texts and were thus a function of idiosyncratic geography - for example, ambiguity over the location of the major ridge of the Tian Shan or the lines connecting historic border posts. Appendix Figure 9 illustrates where these overlapping territorial claims were located in space.

Empirics

To test our hypotheses, we model the effect of changing geopolitical context on demographic change using a first-difference fixed effect difference-in-differences specification. *Our effect of interest is the demographic effect of an area being on the border or having a greater fifth column minority during a conflict*. Thus, whilst all areas in China and the USSR were threatened by the advent of the Sino-Soviet split and so experienced demographic change, we can use non-border areas or those with fewer minority populations as plausible coun-

Soviet split in 1982, northern Xinjiang was majority Han whilst southern Xinjiang remained overwhelmingly non-Han. We demonstrate that this increase in Han was driven by proximity to non-natural borders with the USSR in Xinjiang's north.

terfactuals to identify the marginal effect of being on the border or having a greater fifth column population during a conflict. It would, of course, be difficult to credibly identify this effect by comparing average differences across such areas. Even if we include year dummies and so pick up common temporal shocks such as generally higher migration during the years of the Great Leap Forward (1958-62) the Cultural Revolution (1966-76), there is likely a substantial amount unobserved spatial heterogeneity such as the presence of natural resources, territorial 'homelands' (Shelef, 2016), low state capacity in mountainous areas (Scott, 2009), or quality of land that affects demographic change. If these unobserved factors also correlate with proximity to an international border or the presence of a particular minority, then even flexibly controlling for latitude and longitude our estimates of the effect of changing geopolitical context will be biased.

A major advantage of panel data over cross-sectional data is that we can difference out both common temporal shocks and this kind of time-invariant unobserved spatial heterogeneity. We do so by, in each period, analysing the change in provincial or county demography. We model demographic change in a linear parametric form, focusing on the border/non-border difference for parsimony, in each province or county *i* in period $t = j$ as:

$$y_{ij} = \alpha + \beta_{t=j} time_{ij} + \theta_{BorderThreat} BorderThreat_{ij} + \sigma_i + e_{ij}$$

where y_{ij} is the demographic outcome - for example, the number of migrants in province or county i in time period j, $BorderThreat_{ij}$ is an indicator of whether a border area is threatened in time period j, $time_j$ is the common shock

to provincial or county demography in period $t = j$, σ_i are temporally invariant fixed effects that capture average or time-invariant differences in provincial and county demography, and e_{ij} is the error term.

We identify $\theta_{BorderThreat}$ using a difference-in-differences estimator. Where B is the group of units on the border during the advent of hostile relations in period 1 (i.e. $\Delta Threat_{i1 \in B} = 1$) and the non-border units are the control group for the effect of being on the border (i.e. $\Delta Threat_{i1 \in NB} = 0$), we have

$$\Delta y_B - \Delta y_{NB} = (\beta_{t=1} + \theta_{threat} \Delta Threat_{i \in B}) - (\beta_{t=1} + \theta_{threat} \Delta Threat_{i \in NB})$$

$$\Rightarrow \Delta y_B - \Delta y_{NB} = \theta_{BorderThreat}$$

First-differences and ordinary fixed effect estimation are very similar, the major distinction is that first-differences is more efficient when there is serial correlation in the error term Δe_{it}. The Wooldridge (2002) first-difference based test indicates that there is serial correlation in the first derivative error term (p value < 0.000) so we will employ first-differences rather than fixed effects.

The identifying assumption is parallel trend. This means that we are assuming that, absent the shock to geopolitical context brought about by the Sino-Soviet split, the *change* in migration or population from 1958 to 1959 or 1982 to 1983 would have been the same on average across provinces and counties bordering and not bordering the USSR. We will later verify this assumption by graphically illustrating the similar trend in migration to provinces bordering the USSR and not bordering the USSR pre-1959.

Finally, in all specifications, we conservatively cluster observations at the provincial and county levels using Arellano (1987)'s covariance matrix to ac-

count both for general heteroskedasticity and serial cross-sectional correlation in the error term.

Provincial-level results

We begin with the results of our provincial model specification, which provide the best-identified evidence in support of **H1** due to the large number of pre-treatment periods. We find that the Sino-Soviet split is estimated to lead to an additional 6-15% increase in migration to each province bordering the USSR (Table 3 Columns 1-4) and an overall increase of 340,000 persons (Columns 5-6). This is a very substantively significant increase given that the average population of the four border provinces was only 10 million in 1958. Table 14 in the Appendix reports the covariate coefficient estimates. As expected, higher levels of provincial GDP, lower rates of death rate, and lower grain production growth per capita[30] are associated with higher migration and population growth. All other covariates tend to be more mixed in sign or insignificant.

The specifications when pooling across provinces are more mixed in terms of statistical significance but the reported effects are also supportive of **H1** (Table A.17). The estimated coefficients are roughly approximate in magnitude to the first-difference estimates, with the Sino-Soviet split estimated to lead to an increased 150,000-300,000 persons in China's border provinces.

We were concerned that these results may have been driven by a particular province. We thus ran the main model dropping Xinjiang, Jilin, Heilongjiang

[30] This result makes sense given the connection between exaggerated grain production growth and increased mortality during the Great Leap Forward (Meng, Qian and Yared, 2015) - higher reported growth is an indicator of famine severity which would be expected to deter inward migration.

Diff-in-diff: The effect of the Sino-Soviet split on demographics of border and non-border provinces

	Inward migration		*Net migration*		*Population (10,000)*	
	(1)	(2)	(3)	(4)	(5)	(6)
Sino-Soviet split	0.07***	0.05*	0.02	0.03	−8.63	−14.16**
	(0.03)	(0.03)	(0.02)	(0.02)	(10.88)	(6.32)
Border USSR:Sino-Soviet split	0.14***	0.14***	0.06**	0.11**	35.01***	41.58***
	(0.04)	(0.04)	(0.03)	(0.05)	(12.70)	(9.00)
First Differences	Yes	Yes	Yes	Yes	Yes	Yes
Provincial Controls	No	Yes	No	Yes	No	Yes
Provinces	29	27	28	27	29	27
Observations	910	782	896	782	903	782
F-statistic p-value	0.00	0.00	0.02	0.03	0.01	0.00

Table 3: *p $<$ .1; **p $<$ .05; ***p $<$ .01 Each model is a provincial-level first-difference difference-in-differences specification where treatment of territorial threat is determined by the interaction between provincial contiguity with the USSR and the years of the Sino-Soviet split. Standard errors are clustered at the provincial level using Arellano's covariance matrix. F-statistic tests whether the effect of Sino-Soviet split is different across border/non-border provinces

and Inner Mongolia successively, and the results are unchanged (Table A.16 Columns 2-5).

One may still be concerned about violation of the parallel trends assumption. We address this concern in two ways. First, we ran the main model dropping all provinces except those contiguous with a province that is contiguous with the USSR (for an illustration see Appendix Figure 8). The results are unchanged - border provinces still had a disproportionate increase in migration and population as a result of the Sino-Soviet split compared to otherwise similar northern provinces such as Shaanxi, Gansu and Liaoning. These results indicate that there was a disproportionate demographic effect of being on the USSR border during the Sino-Soviet split as opposed to a general northern China effect.

Second, we applied the generalized synthetic control (GSC) method which is explicitly designed to deal with violation of parallel trend (Xu, 2017). The GSC method produces an unbiased estimator of the average treatment effect while relaxing the assumption that the average outcomes of treated and control units followed parallel paths in the absence of treatment.[31] The essence of the GSC procedure is the construction of a more plausible counterfactual demographic trend for the border provinces from which we can then judge the effects of the Sino-Soviet split.[32]

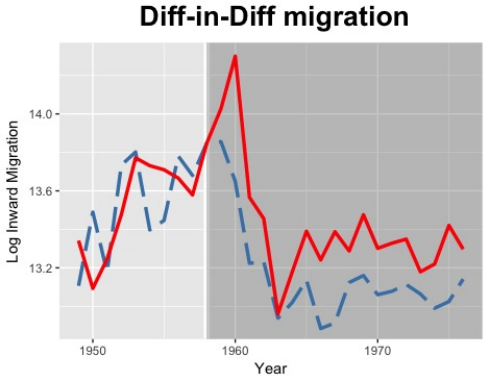

Figure 3: Comparison of log migration to the four border provinces (Red-Solid) and the counterfactual created from the composite synthetic control (Blue-Dashed)

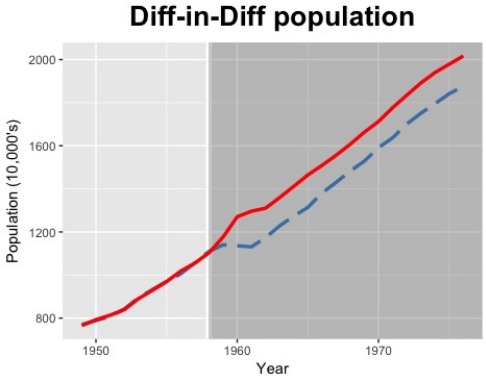

Figure 4: Comparison of total population of the four border provinces (Red-Solid) and the counterfactual created from the composite synthetic control (Blue-Dashed)

The effects are again supportive of hypothesis **H1**. The estimated effect of the Sino-Soviet split on migration and total population of the border provinces is significantly greater than in the first-difference results (Table 15 Columns 1-

[31] For discussion of the assumptions underlying the GSC method, see Xu (2017, 60-62). The GSC procedure improves on previous synthetic control methods by allowing for multiple treated units and by explicitly modelling time-varying heterogeneity without sacrificing many degrees of freedom.

[32] As gsynth requires a balanced panel, prior to running these models we interpolated a small amount of missing data using the Amelia II package (Honaker et al., 2011). For the missingness plot, see Supplementary Materials B.

3) with the Sino-Soviet split estimated to have increased the total population of the border provinces by 1.3 million persons. The substantial effect of the Sino-Soviet split on the demography of the provinces bordering the USSR is also clear from Figures 3 and 4 which represent the migration and population of the border provinces relative to the synthetic counterfactual. The synthetic counterfactual and the border provinces had very similar trends in migration and population growth prior to 1959, and the Sino-Soviet split clearly led to a significant increase in migration and population in the provinces bordering the USSR. Whilst the difference in migration to the border and the counterfactual provinces began with the Sino-Soviet split the *level* of overall migration was clearly affected by other factors including depressed migration after the Great Leap Forward and renewed mass migration during the Cultural Revolution. Specifically, after 1968 Mao sought to defuse the Red Guards of the Cultural Revolution by sending youth to the countryside and scaling up the "Up to the Mountains and Down to the Countryside Movement" (*shangshan xiaxiang*) (1955-1976). Whilst the level of migration to the border provinces was scaled up by the Cultural Revolution, we would emphasize that the decision to disproportionately send these Red Guard youth to areas on the USSR border rather than other rural areas of China was a function of geopolitical concerns wrought by the Sino-Soviet split. We observe no similar pattern during the pre-1959 phase of the "Up to the Mountains and Down to the Countryside Movement."

Finally, we can also test **H1** in a different way by examining whether the provinces bordering the USSR experienced a disproportionate rise in the proportion of its population that is Han Chinese during the Sino-Soviet split. Whilst data on ethnic proportions is more scanty, we find indeed that there was an ad-

ditional 37-42 % rise in the percentage of Han in provinces bordering the USSR between 1953 and 1982 (Table 19).[33]

To rule out the increasing settlement of China's border provinces is simply a function of progressively increasing state capacity in the frontier over time, we can instead test whether there was a disproportionate *drop* in migration and population in the borderlands at the conclusion of the Sino-Soviet split in the 1980s. This is indeed the case - the border provinces experienced a disproportionate drop in population and inward migration after 1982 relative to the late 1960s and 70s (Supplementary Appendix B). Moreover, there was no significantly different change in the ethnic make up of border and non-border provinces between 1982-1990 (Supplementary Materials B Table). Consistent with the importance of geopolitical context rather than progressively improving state capacity for incentivizing state-sponsored demographic change in a frontier, this suggests that once the Sino-Soviet split ended, mass Han settlement of the borderlands ceased. For example, whilst the proportion of non-Han in Xinjiang fell from 93.01% in 1953 to 59.61% by 1982, it began to rise once more to 62.42% by 1990 as mass Han settlement of Xinjiang ceased.[34]

Xinjiang county-level results

In this section we examine our more disaggregated predictions about the location and ethnicity-specific predictors of demographic engineering using county-

[33] This result is slightly attenuated in magnitude when including provincial ethnic proportions from the 1964 census though the statistical significance is unchanged (See Supplementary Materials B).

[34] This result is also substantiated using the county-level data from Xinjiang — the end of the Sino-Soviet split was associated with a drop in Han and XPCC settlement and increase in the Russian population across all counties in Xinjiang (Supplementary Appendix B).

level data from Xinjiang. The difference-in-differences results are supportive of hypothesis **H2**. The Sino-Soviet split is associated with an average fall of 108 Russians across every Xinjiang county, which constitutes an average 47% fall in the pre-split Russian population (Table 4). Moreover, consistent with the theory of this paper, only the ethnic Russian population significantly fell as a result of the Sino-Soviet split.

Diff-in-diff: The effect of the Sino-Soviet split on ethnic populations across Xinjiang counties 1952-1985

	Population by Ethnicity					
	Russian	Han	Hui	Kyrgyz	Kazakh	Uyghur
Sino-Soviet Split	−107.77***	9,899.93***	703.73***	−6.62	62.66	1,970.51
	(37.23)	(2,180.00)	(147.02)	(97.17)	(312.46)	(1,282.01)
First Differences	Yes	Yes	Yes	Yes	Yes	Yes
Counties	80	80	80	80	80	80
Observations	1896	1896	1896	1896	1896	1896
Note:						*p<0.1; **p<0.05; ***p<0.01

Table 4: Each model is a first-difference difference-in-differences specification where the DV is the ethnic population of each Xinjiang county between 1952-1985. Standard errors are clustered at the county level using Arellano's covariance matrix.

Also consistent with **H2**, state-sponsored *bingtuan* and Han resettlement was particularly targeted at those counties that held a significant ethnically Russian population (Table 5). For example, a county that had 100 more Russians than an otherwise similar county is expected to have a 10% greater increase in percentage Han during the Sino-Soviet split (Column 4). Indeed, when examining the coefficient on Pop. Russian, one can see that increases in *bingtuan* and Han settlement is only associated with the location of ethnic Russians during the years of the Sino-Soviet split.

Again, this effect is unique to the Russian minority; we do not obtain similar results when instead replacing population Russian with the population of a county that is Hui, Han, Kazakh, Kyrgyz, or Uyghur (Figures 5 -6).[35] Given the politically central role that Russians played in the former USSR, we interpret these results as suggesting that both expulsions and state-sponsored resettlement were targeted at an ethnic minority viewed as particularly close politically to the USSR.

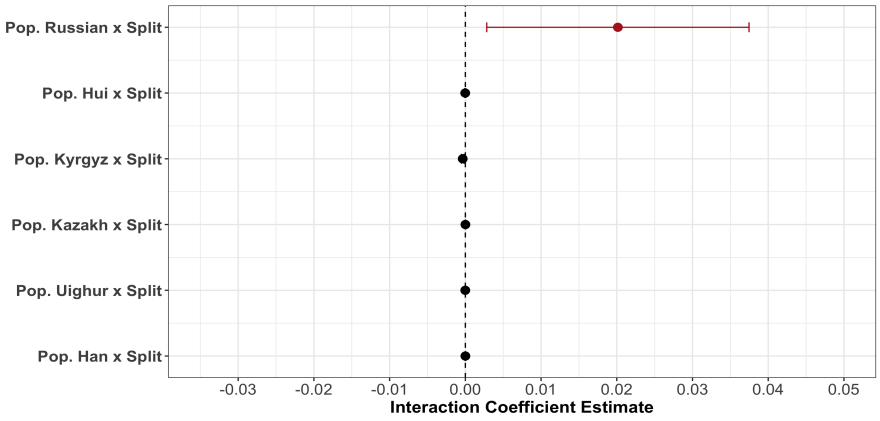

Figure 5: Effect of Sino-Soviet split on log bingtuan population by ethnic population with 95% confidence intervals

[35] See Supplementary Materials B.

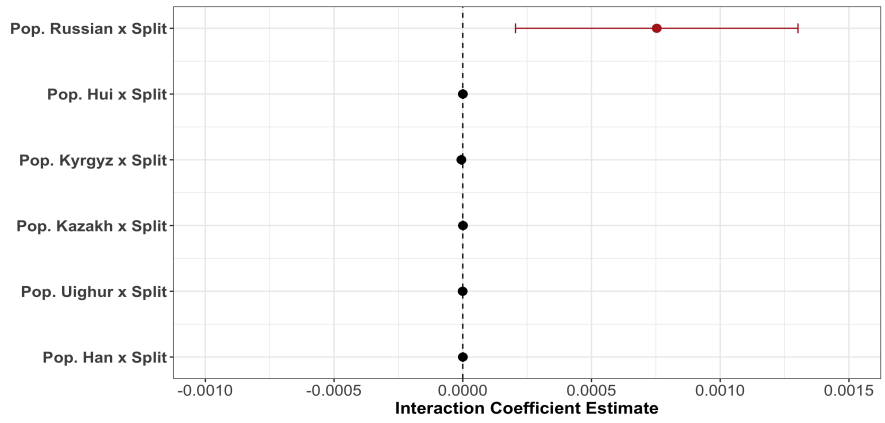

Figure 6: Effect of Sino-Soviet split on log Han percent by ethnic population with 95% confidence intervals

Diff in diff: The effect of the Sino-Soviet split on XPCC (*bingtuan*) and % Han in counties by population Russian 1952-1985

	Log Pop XPCC		*Log Han %*	
	(1)	(2)	(3)	(4)
Pop. Russian	-0.002^{***}	-0.001^{***}	-0.0001^{*}	-0.0000
	(0.001)	(0.0004)	(0.0000)	(0.0000)
Sino-Soviet Split	3.06^{***}	3.63^{***}	0.08^{***}	0.04^{***}
	(0.27)	(0.30)	(0.01)	(0.01)
Pop. Russian: Sino-Soviet Split	0.01^{***}	0.02^{**}	0.0000	0.001^{***}
	(0.002)	(0.01)	(0.0000)	(0.0003)
First differences	Yes	No	Yes	No
Counties	80	80	80	80
Observations	1175	1175	1896	1896
F-statistic	0.00	0.02	0.93	0.01

Table 5: Each model is a difference-in-differences specification where the DV is the log of Xinjiang county XPCC (*bingtuan*) population or the log percentage of the county that is Han between 1952-1985. Standard errors are clustered at the county level using Arellano's covariance matrix. F-statistic tests whether the effect of Sino-Soviet split is different across counties by population Russian

Turning to the theorized heterogeneity across natural and non-natural border areas, the difference-in-differences results are supportive of hypothesis **H3**. The

Sino-Soviet split led to a significant rise on average in both the number of XPCC (*bingtuan*) settlers and the proportion of Han Chinese across all counties in Xinjiang (Table 6). However, this rise was particularly dramatic in counties proximate to Xinjiang's non-natural northern border with the USSR. Whether we measure proximity through a binary measure of a county being located in northern Xinjiang (Columns 1 and 4), a binary measure of whether a county shares a non-natural border with the USSR (Columns 2 and 5), or simply through the distance of each county to Xinjiang's northern border with the USSR (Columns 3 and 6), Han and *bingtuan* settlement was particularly targeted at those counties proximate to Xinjiang's non-natural border with the USSR. When instead pooling across all counties in all years, the results are unchanged (Table A.20).

In general, in counties where the USSR's threat to territorial control was most acute, the rise in *bingtuan* settler population and proportion Han was almost double that of other counties in Xinjiang. For example, whilst the Sino-Soviet split led to an approximately 7% rise in the proportion of Han across Xinjiang, it led to a doubly significant 14% rise in the counties of Xinjiang that shared a non-natural border with the USSR (Column 5). Indeed, as one progressively moves further away from Xinjiang's non-mountainous border with the USSR, the rise in county XPCC and Han settlement during the Sino-Soviet split is gradually attenuated (Columns 3 and 6).

Also consistent with **H3**, the rise of Han demographic dominance in the counties sharing a non-natural border with the USSR was achieved not only through an influx of new XPCC settlers; the rise in Han predominance was also achieved via the expulsion of the ethnically Russian community in the borderlands (Table 7). The reduction in Russian population is particularly dramatic in

Diff-in-diff: The effect of the Sino-Soviet split on XPCC (*bingtuan*) settler population and % Han in Xinjiang counties by border distance 1952-1985

	Log Pop XPCC			*Log % Han*		
	(1)	(2)	(3)	(4)	(5)	(6)
Sino-Soviet Split	2.06***	3.15***	4.79***	0.04***	0.07***	0.12***
	(0.38)	(0.30)	(0.37)	(0.01)	(0.01)	(0.01)
Northern Xinjiang:						
Sino-Soviet Split	2.43***			0.07***		
	(0.47)			(0.01)		
Non-natural Border:						
Sino-Soviet Split		1.54***			0.07***	
		(0.50)			(0.02)	
Non-natural Border Dist.:						
Sino-Soviet Split			−0.53***			−0.01***
			(0.11)			(0.004)
First Differences	Yes	Yes	Yes	Yes	Yes	Yes
Counties	80	80	80	80	80	80
Observations	1175	1175	1175	1896	1896	1896
F-statistic p value	0.00	0.00	0.00	0.00	0.00	0.00
Note:						*p<0.1; **p<0.05; ***p<0.01

Table 6: Each model is a first-difference difference-in-differences specification where the DV is the log of Xinjiang county XPCC (*bingtuan*) population or the percentage of the county that is Han between 1952-1985. Standard errors are clustered at the county level using Arellano's covariance matrix. F-statistic tests whether the effect of Sino-Soviet split is different across non-natural border and other counties

the counties in northern Xinjiang (Column 1) and the counties of Xinjiang that shared a non-natural border with the USSR (Column 3). Similarly, the fall in the Russian population during the Sino-Soviet split is most dramatic in the counties sharing a non-natural border with the USSR - as one progressively moves away from Xinjiang's northern border, there is correspondingly a less dramatic fall in the Russian population (Column 5). The Sino-Soviet split is estimated to lead to a fall of approximately 200 ethnic Russians in Xinjiang counties proximate to a

non-natural border with the USSR, which amounts to an average 48% decline in the Russian population.[36] The estimated results when pooling across counties are generally similar.

These results are not being driven by our dichotomous measure of natural and non-natural borders. We have theorized the 'naturalness' of borders as a function not of focality but rather of the difficulty or ease of traversing a border. As the difficulty of crossing a border is continuous, we can instead measure the 'naturalness' of a border through a more continuous measure of the mean altitude of each county. The difference-in-difference results are supportive of hypothesis 3. In counties of Xinjiang where mean altitude is lower, there was a substantially greater fall in the ethnic Russian community and increase in Han and *bingtuan* populations during the Sino-Soviet split (Appendix).

Again, the fall in population is unique to China's Russian minority - there is no similar reduction in the non-natural border counties amongst Xinjiang's much larger Hui, Kyrgyz, Kazakh or Uyghur minorities.[37] These results therefore run contrary to the empirical predictions of Mylonas (2012) and Han and Mylonas (2014) whom predicted that the Sino-Soviet split would lead to exclusionary measures directed toward China's Kazakh and Uyghur minorities; whilst the Sino-Soviet split did lead to measures designed to cut off Kazakhs and Uyghurs from their cross-border kin, this did not take the form of expulsions or resettlement. For example, revealingly, during the 1962 Yili-Tacheng Incident approximately 75,000 ethnic Kazakhs and Uyghurs looted Chinese government buildings and fled across the border to the USSR with their contraband and

[36] Counties along the northern border had an average of 410 Russians in 1952.

[37] See Supplementary Materials B.

livestock (Zhang, 2014). The Chinese state was dismayed at the Kazakh exodus and sought to prevent any more Kazakhs and Uyghurs leaving for the USSR by sealing the border and retrieving information on those who left from Soviet officials. Given that the state sought to prevent their exodus, this suggests that non-Russian minorities were not viewed as fifth columns.

Exit: The effect of the Sino-Soviet split on the Russian population in Xinjiang counties by border distance 1952-1985

	Population Russian					
	(1)	(2)	(3)	(4)	(5)	(6)
Sino-Soviet Split	−0.19	−1.53**	−65.82*	−41.51**	−267.94***	−180.78***
	(0.32)	(0.64)	(37.65)	(19.16)	(84.36)	(60.37)
Northern Xinjiang: Sino-Soviet Split	−194.15***	−132.70***				
	(64.11)	(43.48)				
Non-natural Border: Sino-Soviet Split			−253.34**	−206.14*		
			(109.05)	(108.39)		
Non-natural Border Dist.: Sino-Soviet Split					61.66***	40.59***
					(19.70)	(14.56)
First Differences	Yes	No	Yes	No	Yes	No
Counties	80	80	80	80	80	80
Observations	1896	1896	1896	1896	1896	1896
F-statistic p value	0.00	0.01	0.02	0.22	0.00	0.01
Note:						*p<0.1; **p<0.05; ***p<0.01

Table 7: Each model is a difference-in-differences specification where the DV is the total population of Russians in each Xinjiang county. Standard errors are clustered at the county level using Arellano's covariance matrix. F-statistic tests whether the fall in ethnic Russians over the Sino-Soviet split is different across non-natural border and other counties

Rather, given the politically central role that Russians played in the former USSR (Laitin, 1998), we interpret the unique fall in the ethnic Russian community as suggesting that exclusion was focused on China's relatively small but politically influential Russian minority who were disproportionately induced

to leave for the USSR as a result of the Sino-Soviet split. More broadly, the fact that demographic engineering was targeted at partitioned Russians rather than Kazakhs or Uyghurs suggests that only having cross-border kin in a hostile foreign power is not enough to produce demographic engineering; it is also essential that such kin be in a position of power in the foreign state.[38] We have substantiated this interpretation through off-record discussions with remaining ethnic Russians in Yining City, Yili and interviews with *bingtuan* members in the Fourth Bingtuan Division in the Yili Prefecture.[39] In essence, rapid demographic change in areas of Xinjiang proximate to a non-natural border with the USSR was achieved through the synchronous expulsion of ethnic Russians and an influx of state-sponsored Han settlers who took their place.

Finally, inconsistent with **H**4, the disproportionate rise in XPCC and Han settlement in Xinjiang counties sharing a non-natural border with the USSR is not a function of such areas being characterized by more overlapping territorial claims. There is no significant difference in XPCC and Han settlement across counties that shared a formally disputed border with the USSR relative to other counties (Table A.21). Moreover, counties closer to disputed territories in Xinjiang did not experience significantly greater resettlement during the Sino-Soviet split relative to either other counties or to themselves outside the split (Supplementary Materials B). In this respect, the results suggest that Chinese efforts at demographic engineering were not undertaken with a view to consolidating formally disputed territory; rather, China's general fear was that

[38] To be sure, this perspective is shared by Mylonas (2012); our divergent predictions with respect to Russians, Uyghurs and Kazakhs in China stem from a different understanding of the ethnic identity of elites in the Soviet Union.

[39] Due to the extreme sensitivity of this topic and repressive context, we cannot provide quotes.

a secessionist cross-border insurgency could destabilize its hold over Xinjiang as a whole. The evidence thus suggests that demographic engineering was undertaken to consolidate Chinese control over areas of Xinjiang characterized by non-natural and permeable borders and illicit personnel, equipment and propaganda flows from the USSR.

Soviet response

In this section we test whether the Soviet Union similarly sought to consolidate its control over its frontier with China by engaging in demographic engineering. We only test hypotheses 1 and 2 due to lack of disaggregated data on demographic change across natural and non-natural border areas. Nevertheless, patterns of demographic change in the former Soviet Union indeed suggest that the Sino-Soviet split analogously induced (i) the mass resettlement of ethnic Russians and expulsion of Chinese on the Russian side of the Sino-Soviet border and (ii) the resettlement of Russians to Chinese-populated areas.

Czarist Russia had long incentivized the resettlement of Russians to its newly acquired territories in the Far East and, under Stalin, the USSR had frequently used forced deportations to populate and develop Siberia. This resettlement policy experienced new life as a result of the downturn in Sino-Soviet relations; as An summarizes, "by the mid-1960s, the Soviet Union was displaying conspicuous haste in planning to develop the vast and thinly populated region of Siberia by pouring in substantial capital and people. This policy indicated the USSR's long-term goal to turn Siberia into a bastion against the Chinese, and had made

feverish efforts to attract permanent settlers" (An, 1973, 87).[40] The Sino-Soviet split also led to the mass expulsions of ethnic Chinese in Russia. The Russian Empire had long feared that China could use its large population and influence over the expatriate Chinese community to undermine its control over its newly acquired territories in the Far East (Alexeeva, 2008).[41] Consequently, in periods of conflict with China during the 1860s and the early 1900s the Russians had sought to coercively expel Chinese communities en masse in sensitive border towns such as Blagoveshchensk and Vladivostok (Timofeev, 2003). Following the decline in Sino-Soviet relations in 1959, the Soviet Union again deported a substantial component of the ethnic Chinese community who had migrated to the USSR to study and conduct shuttle trade in the Far East over the preceding decade (Lüthi, 2010; You and Kraus, 2014).

This disproportionate decline in the ethnic Chinese community and increase in the ethnic Russian community in the Russian Far East is evident in Soviet demographic statistics. Unfortunately, unlike in China, there does not exist publicly available yearly demographic data for the USSR. However, disaggregated oblast-level demographic data exist for five censuses for the Russian Soviet Federative Socialist Republic between 1939-1989.[42] We can therefore test using an analogous difference-in-differences design whether the censuses conducted

[40] For example, the Soviet authorities planned to turn the contested city of Blagoveshchensk, which faces the Chinese city of Heihe across the Amur, into a showcase industrial city and eventually attract tens-of-thousands of new residents.

[41] Fears that the Chinese could become the dominant ethnic group in the Far East are periodically revived by Russian media and leaders such as Vladimir Putin still today.

[42] Oblast-level demographic data do not exist for the Central Asian republics so they are excluded from the analysis. The available years with standard oblast boundaries are 1939, 1959, 1970, 1979, and 1989. Data source: Russian State Archive of Economy accessed from `http://www.demoscope.ru/weekly/ssp/census.php?cy=2` 02/12/2017.

during the Sino-Soviet split (1959-1982) report a disproportionate decline in the ethnically Chinese community and rise in the ethnically Russian community in the four Russian oblasts in the Far East bordering China (see Figure 7).

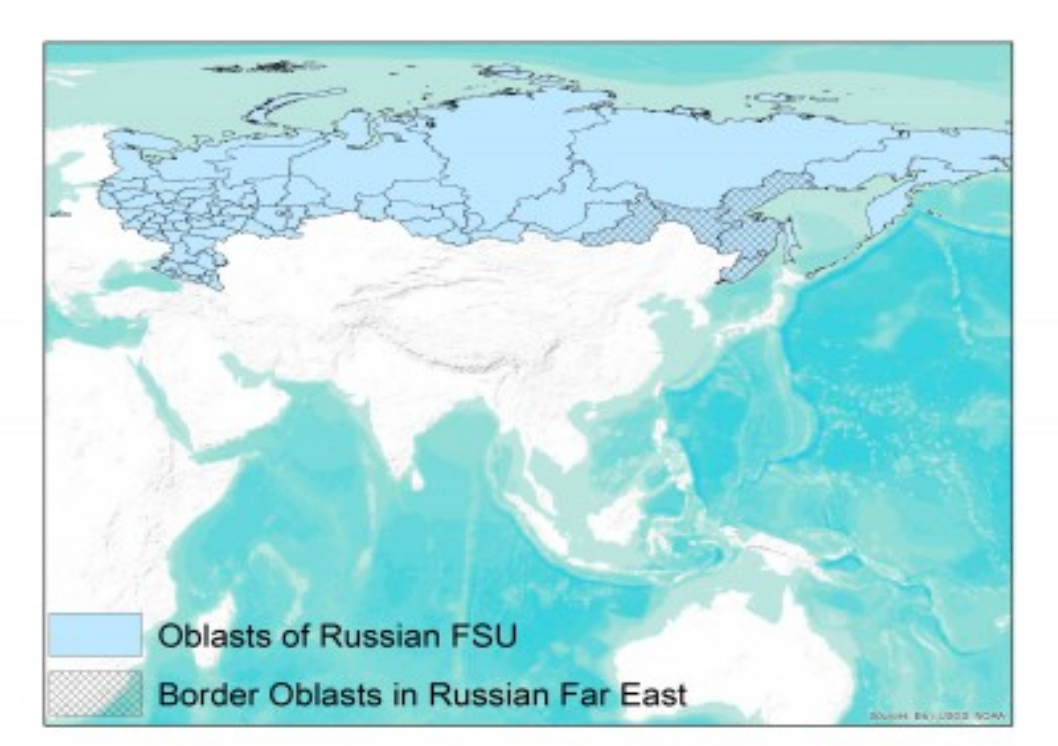

Figure 7: Oblasts of the Russian Soviet Federative Socialist Republic of the Former Soviet Union (FSU)

This is indeed the case. Consistent with **H1**, The Sino-Soviet split is estimated to have led to an increase of approximately 157,000-240,000 ethnic Russians in each of the Far East Russian oblasts bordering China (Table 8 Columns 1 and 2) and a total increase in population of 156,000-274,000 (Columns 5 and 6). Moreover, the Sino-Soviet split is associated with a fall of approximately 1,000 in the total ethnic Chinese population in the four border oblasts, which

constitutes an average 35% decline in the Chinese population.[43] The approximately identical estimate of both total population and ethnic Russian change suggests that the increase in the Russian population is the product of internal migration rather than ethnic switching among USSR nationals.[44] Also consistent with **H2**, the results suggest that ethnic Russian resettlement was targeted at areas populated by more Chinese during the Sino-Soviet split. Whilst statistical significance varies across specifications, areas populated by more Chinese are estimated to have less Russian population growth outside the Sino-Soviet split relative to other areas and greater Russian population growth during the split (Appendix Table 22).

Given the long time period in between each Russian census and the lack of oblast-level census data from the other Soviet Republics, however, we acknowledge that we cannot definitively conclude that these demographic shifts on the Russian frontier can be attributed to the changing nature of Sino-Soviet relations. Nevertheless, the strikingly parallel nature of state-sponsored demographic change either side of the Sino-Soviet border over 1959-1982 suggests that the theory outlined in this paper accurately captures the dynamics of demographic engineering.

---

[43] The border oblasts had an average 2,800 ethnic Chinese in 1939.

[44] It could also be the increase in total population is due to more individuals in the Far East declaring themselves USSR citizens. However, given the political dominance of Russians in the Soviet Union, the increase in the ethnic Russian population in the Far East due to the Sino-Soviet split is less plausibly the result of more individuals declaring themselves USSR nationals than, for example, an increase in the Chinese or Korean population would have been. Indeed, we find that the Chinese population fell over the split. As such, the increase in the ethnic Russian population is strongly suggestive of a mechanical increase in the Far East Russian population due to internal colonization rather than more individuals declaring themselves USSR nationals.

Russia: The effect of the Sino-Soviet split on the demographics of Russian oblasts by contiguity with China 1939-1989

	Russian pop.		*Chinese pop.*		*Total pop.*	
	(1)	(2)	(3)	(4)	(5)	(6)
Sino-Soviet Split	−114,953***	−190,907***	35	23	−141,101***	−248,855***
	(40,447)	(50,853)	(28)	(27)	(44,637)	(55,242)
Border China: Sino-Soviet Split	162,598***	243,112***	−950**	−967**	165,426**	274,457***
	(56,820)	(65,365)	(463)	(476)	(64,071)	(71,862)
First differences	Yes	No	Yes	No	Yes	No
Oblasts	77	77	77	77	77	77
Observations	356	356	298	298	356	356
F-statistic p value	0.01	0.06	0.04	0.00	0.02	0.03

Note: *p<0.1; **p<0.05; ***p<0.01

Table 8: Each model is a difference-in-differences specification where the unit of analysis is the Russian oblast in the former Soviet Union and the DV is demographic change as measured in five Soviet censuses (1939-1989). Standard errors are clustered at the county level using Arellano's covariance matrix. F-stat tests whether population change in the Sino-Soviet split is different across border/non-border oblasts

Conclusion

This paper has sought to advance our understanding of the conditions under which states coercively alter their internal demography through expulsions and mass resettlement. We theorized that states employ demographic engineering to forestall secessionist minority mobilization and cross-border insurgencies. As such, we predicted that demographic engineering would be targeted in conflicts at vulnerable non-natural border zones and those populated by minorities who are co-ethnics with elites in a hostile foreign power. We then tested our theoretical predictions against the timing and location of demographic engineering in China and the USSR during the Cold War. Exploiting the temporal break in relations between China and the USSR during the Sino-Soviet split (1959-

1982) and cleanly identifying its effects via a difference-in-differences design, we found that Han settlement during the Sino-Soviet split was particularly targeted at Chinese border areas with the USSR lacking a natural boundary and populated by ethnic Russians. Moreover, we found evidence that mass expulsions were directed at China's Russian minority who resided in areas proximate to a non-natural boundary with the USSR. In short, these results suggest that as China and the USSR fell out politically in the late 1950s and the USSR sought to undermine Chinese control over its frontier, China responded by expelling ethnic Russians and fostering mass Han settlement to areas where its territorial control was most vulnerable. Correspondingly, the USSR in turn expelled ethnic Chinese and fostered mass Russian settlement to its vulnerable Far East frontier with China.

One may question the extent to which the results of this paper are generalizable to other settings. China and the former USSR during the Cold War both exercised a degree of control over their internal demography that is incomparable to non-Communist countries. Demographic engineering in market-based economies such as 20th century Italy tended to take place not through the wholesale coercive movement of peoples but rather through government investment to economically incentivize individuals from the core to move to contested peripheries. Yet, whilst future work would do well to explore the different *means* through which states have sought to alter their internal demography and their potentially different political consequences, we contend that the scope conditions that incentivized demographic engineering in China and the former USSR are generalizable and useful for understanding the incidence of state-sponsored demographic change elsewhere. Chiefly, both China and the

former USSR during the 20th century were states characterized by a majority ethnic group inhabiting a core region and ethnically distinct peripheries. Moreover, both countries were located in a regional system in which international borders were highly contested and dynamic. These shared structural similarities help explain why other states in Asia over the same time period - whether Afghanistan, Burma, Bangladesh, Bhutan, Indonesia, Iraq, India, Israel, Thailand or Sri Lanka - provided material inducements for individuals to resettle to contested border regions (e.g. Hazarika 2001; Natali 2015; Lustick 1993; Tirtosudarmo 2001; Bleuer 2012) whilst the extent of demographic engineering in other parts of the world was more limited. Moreover, when examining the history of highly consolidated states such as the United States, Canada, Japan, Italy or the United Kingdom, we see that demographic engineering was also disproportionately undertaken during their periods of state expansion into ethnically distinct frontiers and competition with neighbouring powers. We therefore expect the results of this paper to be generalizable not to all states at all periods of time but rather specifically to those engaged in processes of state-building in ethnically distinct frontiers and contestation with neighbouring powers.

Insofar as this paper has substantiated the critical international dimension to state-sponsored demographic change, its policy implications are clear. For example, in contemporary Burma or China, international actors and non-government organizations have sought to limit demographic engineering against minorities by criticizing and slapping sanctions on domestic political leaders for violating human rights. Yet, sanctions fail to acknowledge or address the structural factors producing state-sponsored demographic change in Rakhine state and Xin-

jiang, both of which are currently characterized by a cross-border insurgency.[45] Our results suggest that efforts by concerned actors seeking to prevent demographic engineering would be best supplemented and/or redirected towards increasing the capacity and willingness of regional actors such as Afghanistan and Bangladesh to credibly commit to not providing a base for insurgent groups.

Nevertheless, there is great scope for further work to better understand the conditions under which demographic engineering is employed by states and identify its likely international and domestic political consequences. It is far from the case that all instances of state-sponsored demographic change are related to international conflict - for example, the colonial state in Africa often forcibly resettled indigenous persons to “tribal reserves" whilst the post-colonial state has often resettled land clients to areas with agricultural potential, in turn engendering substantial conflict in areas such as the Keynan Rift Valley (Boone, 2017). Future work would therefore do well to develop and test a domestic political rationale for when and where states would seek to coercively alter their internal demography. Such work would assist this paper in revitalizing the study of political demography - an academic sub-field that Teitelbaum (2015) notes has, despite periodic edited volumes (e.g. Weiner and Russell 2001; Goldstone, Kaufmann and Toft 2012; Haklai and Loizides 2015), been largely neglected by social scientists. On the one hand, due to their focus on the developed world, demographers have tended to ignore the role of the state in structuring sub-national demographic change. On the other hand, political scientists have largely shied away from the quantitative study of demography due to the general endogeneity

[45] Since the early 1990s, there have been a number of Islamist-inspired uprisings in Xinjiang that the Chinese state has blamed on co-religionists in Afghanistan and Pakistan.

of migration and poor sub-national demographic data outside the contemporary West.[46] Yet, rather than being being treated only as an input, ethno-national demography should be recognized and studied as a substantively important output of international relations (Darden and Mylonas, 2016; Bulutgil, 2016). By theorizing and empirically testing predictors of state-sponsored demographic change, this paper seeks to bring both the state back into the study of demography and political demography back into the purview of mainstream political science.

Indeed, allowing for a two-way relationship between international relations and domestic demographic change both complements and complicates the existing literature linking ethnic demography to outcomes such as the diffusion of conflict or to the formation of national borders. Of course, no scholar would disagree that the distribution of ethnic groups is the product of a complex, endogenous process of state-building. Yet, it has been less well-recognized in precisely what way the endogeneity of ethnicity may confound empirical findings. For example, two key takeaways from the literature on ethnicity and conflict are (i) that more consolidated ethnic groups are more likely to engage in conflict (Horowitz, 1985; Cornell, 2002; Toft, 2003; Weidmann, 2009), and (ii) that conflict diffuses across partitioned ethnic groups (Salehyan, 2009; Cederman, Girardin and Gleditsch, 2009; Buhaug and Gleditsch, 2008; Cederman et al., 2013; Rød, 2009; Cederman et al., 2013). However, our findings show that both the concentration of minority ethnic groups and the existence of partitioned ethnic groups is a function of the incidence of historical conflict and the success or failure of state efforts at demographic engineering. Given the likelihood

[46] See Bhavnani and Lacina (2015) for a notable exception.

that existing findings using ethnic demography as an independent variable are therefore confounded in part by omitted variables, our results caution against the current tendency in quantitative work to implicitly treat the distribution of ethnic groups as exogenous. There is thus great scope for further work that can allow us to better understand the multifaceted relationship between international conflict, demographic change and the formation of state boundaries.

Ideally, such work would help redress some of the limitations of this paper. Our empirics have been oriented towards providing well-identified sub-national evidence substantiating our core theoretical predictions. However, there remains great scope for cross-national research testing whether international conflict is indeed associated with ethnic homogenization in frontier zones and disproportionately so along non-natural borders. Moreover, the spatial heterogeneity that we differenced out in the empirics of this paper - for example, the presence of symbolically important homelands, higher quality land or land with valuable resources - could in such work instead be included as predictors of coercive ethnic homogenization in their own right. There is also scope for future work to more closely attend to the strategic and plausibly dialectic nature of demographic engineering. We have exploited the Sino-Soviet split as an unanticipated shock driven by issues unrelated to territory to best identify the effects of international conflict on demographic engineering. Consistent with its unanticipated nature, supplementary analyses suggest that the *level* of demographic engineering in China was greatest in magnitude in the early years of the Sino-Soviet split and thereafter declined. Whilst this suggests that demographic engineering may encounter decreasing returns to scale in territorial conflict, other counterfactual strategic interactions exist. For example, given a less dramatic

and sudden worsening of ties, there may have been tit-for-tat expulsions and tit-for-tat resettlement of co-nationals to Sino-Soviet border areas. Further work on strategic interactions in demographic engineering therefore hold great promise.

Finally, there is great scope to integrate demographic engineering with other work on state-building, conflict and ethnicity and in so doing better understand its contribution to overall demographic change. Demographic engineering, whilst important, is but one of a basket of state-building strategies shaped by conflict (Tilly, 1990). Future work on state-building would do well to theorize the relationship between war, state weakness in threatened peripheries (Lee, 2018), and the choice to respond with particular state-building strategies such as demographic engineering over others. Such work would no doubt contribute to our understanding of the empirical relationship linking war incidence and the existence of large territorial empires (Alesina and Spolaore, 2005). Moreover, whilst our results measuring the impact of international conflict on internal migration and population are not confounded by the endogeneity of ethnicity, ethnic identity is also shaped by conflict and state-building. For example, just drawing international borders can change individual identity as individuals seek to distinguish themselves from non-nationals (Sahlins, 1989). International conflict can also engender national homogenization by increasing patriotism (Sambanis, Skaperdas and Wohlforth, 2015), incentivizing the extension of state education (Darden and Mylonas, 2016), and by incentivizing individual switching as, to avoid ethnic cleansing, members of vulnerable minorities may seek to "pass" as a member of another group.[47] Territorial changes can more-

[47] For example, there was a significant increase in the number of individuals identifying as Italian in the former Yugoslavia during the early 1990s, presumably as a result of people seeking to avoid being ethnically targeted during its civil war.

over exacerbate these shifts by incentivizing both ethnic cleansing of beached minorities (Bulutgil, 2016) and switches in ethnic identity driven by an altered demographic context (Laitin, 1998; Posner, 2005; Chandra, 2012).

We would suggest that key to systematizing this diffuse and nascent literature in political demography is collecting individual panel-data that can test the conditions under which state-building, territorial shifts and conflict shape both mechanical population movements and individual ethnic identity and, thus, disentangle their respective contributions to wider demographic change.[48] Interestingly, for example, both widespread passing among beached minorities and demographic engineering can engender ethno-national homogenization along state borders, yet we have surprisingly little empirical understanding of the role that each has played in calcifying border delimitations over time. Endogenizing ethnicity to international relations therefore does not merely complicate the relationship between ethnicity, state-building and the diffusion of conflict; rather, it also opens up fruitful avenues for future research.

[48] For an exemplary working paper looking at the effect of conflict on ethnic switching, see Fouka (2016).

References

Abramson, Scott F. and David B. Carter. 2016. "The Historical Origins of Territorial Disputes." *American Political Science Review* 110(4):675–698.

Acharya, Avidit and Alexander Lee. 2017. "Economic Foundations of the Territorial State System." Working Paper available at https://web.stanford.edu/ avidit/statesystem.pdf.

Albertus, Michael. 2015. *Autocracy and Redistribution*. Cambridge, UK: Cambridge University Press.

Alesina, Alberto and Enrico Spolaore. 2005. *The Size of Nations*. Cambridge MA: MIT Press.

Alesina, Alberto, William Easterly and Janina Matuszeski. 2011. "Artificial states." *Journal of the European Economic Association* 9(2):246–277.

Alexeeva, Olga. 2008. "Chinese Migration in the Russian Far East." *China Perspectives* (3):20–32.

An, Tai-sung. 1973. *The Sino-Soviet territorial dispute*. Philadelphia, PA: The Wesminster Press.

Anderson, Benedict. 1983. *Imagined communities: Reflections on the origin and spread of nationalism*. London: Verso Books.

Arellano, Manuel. 1987. "Computing Robust Standard Errors for Within-groups Estimators." *Oxford Bulletin of Economics and Statistics* 49(4):431–434.

Banister, Judith. 1984. "An analysis of recent data on the population of China." *Population and Development Review* 10(2):241–271.

Banister, Judith. 1991. *China's Changing Population*. Stanford, CA: Stanford University Press.

Banister, Judith. 2001. Impacts of Migration to China's Border Regions. In *Demography and national security*, ed. Myron Weiner and Sharon Stanton Russell. New York: Berghahn Books.

Bhavnani, Rikhil R and Bethany Lacina. 2015. "The effects of weather-induced migration on sons of the soil riots in India." *World Politics* 67(04):760–794.

Blaydes, Lisa. Forthcoming. *State of Repression: Iraq under Saddam Hussein*. Princeton, NJ: Princeton University Press.

Bleuer, Christian. 2012. "State-building, migration and economic development on the frontiers of northern Afghanistan and southern Tajikistan." *Journal of Eurasian Studies* 3(1):69–79.

Bookman, Milica Zarkovic. 1997. *The Demographic Struggle for Power: The political economy of demographic engineering in the modern world*. Abingdon, UK: Taylor & Francis.

Boone, Catherine. 2017. "Sons of the soil conflict in Africa: Institutional determinants of ethnic conflict over land." *World Development* 96:276–293.

Brezhnev, Leonid. 1982. "President Brezhnev's Speech, Tashkent, 24 March 1982." *Survival: Global Politics and Strategy* 24(4).

Brophy, David. 2016. *Uyghur Nation*. Cambridge MA: Harvard University Press.

Buhaug, Halvard and Kristian Skrede Gleditsch. 2008. "Contagion or Confusion? Why Conflicts Cluster in Space." *International Studies Quarterly* 52(2):215–33.

Bulutgil, H Zeynep. 2016. *The Roots of Ethnic Cleansing in Europe*. Cambridge University Press.

Carter, David B. 2010. "The Strategy of Territorial Conflict." *American Journal of Political Science* 54(4):969–987.

Carter, David B. and Paul Poast. 2015. "Why Do States Build Walls? Political Economy, Security, and Border Stability." *Journal of Conflict Resolution* 61(2):239–270.

Castles, Stephen. 2003. "Towards a Sociology of Forced Migration and Social Transformation." *Sociology* 37(1):13–34.

Cederman, Lars-Erik, Kristian Skrede Gleditsch, Idean Salehyan and Julian Wucherpfennig. 2013. "Transborder Ethnic Kin and Civil War." *International Organization* 67(2):389–410.

Cederman, Lars-Erik, Luc Girardin and Kristian Skrede Gleditsch. 2009. "Ethnonationalist Triads Assessing the Influence of Kin Groups on Civil Wars." *World Politics* 61(3):403–37.

Chandra, Kanchan. 2012. *Constructivist Theories of Ethnic Politics*. Oxford University Press.

Chen, Jian. 2010. *Mao's China and the Cold War*. Chapel Hill, NC: University of North Carolina Press.

Clarke, Michael E. 2011. *Xinjiang and China's Rise in Central Asia-A History*. Taylor & Francis.

Cornell, Svante E. 2002. "Autonomy as a Source of Conflict: Caucasian Conflicts in Theoretical Perspective." *World Politics* 54(2):245–276.

Darden, Keith and Harris Mylonas. 2016. "Threats to territorial integrity, national mass schooling, and linguistic commonality." *Comparative Political Studies* 49(11):1446–1479.

Dun, Zhichun and Wuguo Zhang. 2014. "1962 Xinjiang Yili-Tacheng Incidence: the Soviet Union Instigated the Escape of over 60,000 Border Residents." *CCP History* .

Fall, Juliet J. 2010. "Artificial states? On the enduring geographical myth of natural borders." *Political Geography* 29(3):140–147.

Fang, Songying and Xiaojun Li. 2016. "Historical Ownership and Territorial Indivisibility." Working Paper.

Fearon, James D. 1995. "Rationalist explanations for war." *International Organization* 49(3):379–414.

Fearon, James D and David D Laitin. 2011. "Sons of the soil, migrants, and civil war." *World Development* 39(2):199–211.

Fouka, Vasiliki. 2016. "Backlash: The Unintended Effects of Language Prohibition in US Schools after World War I." *Stanford Center for International Development Working Paper* (591).

Fravel, M. Taylor. 2008. *Strong borders, secure nation : Cooperation and conflict in China's territorial disputes*. Princeton, NJ: Princeton University Press.

Gibler, Douglas M. 2012. *The Territorial Peace: Borders, State Development, and International Conflict*. Cambridge, UK: Cambridge University Press.

Ginsburgs, George. 1978. *The Sino-Soviet territorial dispute, 1949-64*. New York, NY: Praeger Publishers.

Gleditsch, Kristian Skrede, Idean Salehyan and Kenneth Schultz. 2008. "Fighting at Home, Fighting Abroad: How Civil Wars Lead to Interstate Disputes." *Journal of Conflict Resolution* 52(4):479–506.

Goemans, H.E. and Kenneth A. Schultz. 2016. "The Politics of Territorial Disputes: A Geospatial Approach Applied to Africa." *International Organization* 71(1):31–64.

Goemans, Hein. 2006. Bounded Communities: Territoriality, Territorial Attachment, and Conflict. In *Territoriality and Conflict in an Era of Globalization*, ed. Miles Kahler and Barbara F. Walter. New York, NY: Cambridge University Press pp. 25–61.

Goldstone, Jack A, Eric P Kaufmann and Monica Duffy Toft. 2012. *Political Demography: How population changes are reshaping international security and national politics*. Oxford University Press.

Gregory, Ian N., Niall A. Cunningham, Paul S. Ell, Christopher D. Lloyd and Ian G. Shuttleworth. 2013. *Troubled Geographies: A Spatial History of Religion and Society in Ireland*. Bloomington, IN: Indiana University Press.

Haklai, Oded and Neophytos Loizides. 2015. Settlers and conflict over contested territories. In *Settlers in contested lands : territorial disputes and ethnic conflicts*, ed. Oded Haklai and Neophytos Loizides. Stanford, CA: Stanford University Press.

Han, Enze and Harris Mylonas. 2014. "Interstate relations, perceptions, and power balance: explaining China's policies toward ethnic groups, 1949–1965." *Security Studies* 23(1):148–181.

Hazarika, Sanjoy. 2001. A Question of Outsiders: Bangladesh, Myanmar and Bhutan. In *Demography and national security*, ed. Myron Weiner and Sharon Stanton Russell. New York: Berghahn Books.

Herbst, Jeffrey. 1990. "War and the State in Africa." *International Security* 14(4):117–139.

Honaker, James, Gary King, Matthew Blackwell et al. 2011. "Amelia II: A program for missing data." *Journal of Statistical Software* 45(7):1–47.

Horowitz, Donald L. 1985. *Ethnic Groups in Conflict*. Berkeley, CA: University of California Press.

Human Rights Watch. 2000. Burma/Bangladesh: Burmese Refugees in Bangladesh: Still No Durable Solution. Technical report New York, NY: Human Rights Watch.
URL: *https://www.hrw.org/reports/2000/burma/index.htm*

Huth, Paul K. 1998. *Standing Your Ground: Territorial Disputes and International Conflict*. Ann Arbor, MI: University of Michigan Press.

Jian, Chen. 2006. "The Tibetan rebellion of 1959 and China's changing relations with India and the Soviet Union." *Journal of Cold War Studies* 8(3):54–101.

Johnston, Alastair Iain. 1995. *Cultural realism: Strategic culture and grand strategy in Chinese history*. Princeton University Press.

Keegan, John. 1993. *A History of Warfare*. New York, NY: Knopf.

Kitamura, Shuhei and Nils-Petter Lagerlöf. 2015. Natural borders. In *IIES Seminar Paper*. Number 773.

Kocs, Stephen A. 1995. "Territorial Disputes and Interstate War, 1945-1987." *Journal of Politics* 57(1):159–175.

Laitin, David D. 1998. *Identity in formation: The Russian-speaking populations in the near abroad*. Cornell University Press.

Lee, James Z. 1978. Migration and expansion in Chinese history. In *Human migration: patterns and policies*, ed. William H. McNeill and Ruth S. Adams. Indiana University Press, Bloomington, Ind., United States pp. 20–47.

Lee, Melissa M. 2018. "The International Politics of Incomplete Sovereignty: How Hostile Neighbors Weaken the State." *International Organization* .

Li, Chengrui. 1985. "The reliability of China's 1982 population census data." International Population Conference, Florence, 1985, 5-12 June.

Li, Wenshu. 2017. "Goodbye, Lake Changshou." available at https://botanwang.com/articles/201709/accessed 01/09/2018.

Liang, Zai and Michael J White. 1996. "Internal migration in China, 1950–1988." *Demography* 33(3):375–384.

Lustick, Ian. 1993. *Unsettled States, Disputed lands: Britain and Ireland, France and Algeria, Israel and the West Bank-Gaza*. Ithaca, NY: Cornell University Press.

Lüthi, Lorenz M. 2010. *The Sino-Soviet split: Cold War in the communist world*. Princeton, NJ: Princeton University Press.

Ma, Rong. 2011. *Population and society in contemporary Tibet*. Hong Kong University Press.

Mao, Zedong. 1974. *Mao Tse-tung unrehearsed: talks and letters, 1956-71*. London: Penguin books.

Martin, Terry. 2001. Stalinist Forced Relocation Policies. In *Demography and national security*, ed. Myron Weiner and Sharon Stanton Russell. New York, NY: Berghahn Books.

McGarry, John. 1998. "'Demographic engineering': the state-directed movement of ethnic groups as a technique of conflict regulation." *Ethnic and Racial Studies* 21(4):613–638.

Meng, Xin, Nancy Qian and Pierre Yared. 2015. "The institutional causes of China's Great Famine, 1959–1961." *The Review of Economic Studies* 82(4):1568–1611.

Moore, Will H and Stephen M Shellman. 2004. "Fear of persecution: Forced migration, 1952-1995." *Journal of Conflict Resolution* 48(5):723–745.

Morland, Paul. 2014. *Demographic Engineering: Population Strategies in Ethnic Conflict*. Abingdon, UK: Routledge.

Moscona, Jacob, Nathan Nunn and James A. Robinson. 2017. "Social Structure and Conflict." Working Paper 24 January 2017.
URL: *https://www.princeton.edu/rppe/speaker-series/Social-Structure-and-Conflict-January-20-2017.pdf*

Mylonas, Harris. 2012. *The Politics of Nation-Building: Making Co-Nationals, Refugees, and Minorities*. Cambridge, UK: Cambridge University Press.

Natali, Denise. 2015. Settlers and state-building : the Kirkuk case. In *Settlers in contested lands : territorial disputes and ethnic conflicts*, ed. Oded Haklai and Neophytos Loizides. Stanford, CA: Stanford University Press.

Planet Labs. 2017. THE ROHINGYA CRISIS: Burned to the ground. Technical report Reuters.
URL: *http://fingfx.thomsonreuters.com/gfx/rngs/MYANMAR-ROHINGYA/010060630DW/index.html*

Posner, Daniel N. 2005. *Institutions and ethnic politics in Africa*. Cambridge University Press.

Pounds, Norman. 1972. *Political Geography*. New York NY: McGraw-Hill Inc.

Qi, Qingshun. 2002. “Analysis of A Few Issues on Xinjiang in the “Sino-Soviet Treaty of Friendship, Alliance and Mutual Assistance".” *Xinjiang University Academic Journal* (4):58–67.

Robinson, Thomas W. 1972. “The Sino-Soviet border dispute: Background, development, and the March 1969 clashes.” *American Political Science Review* 66(4):1175–1202.

Rød, Halvard Buhaugand Jan Ketil. 2009. “Ethno-nationalist Dyads and Civil War: A GIS Based Analysis.” *Journal of Conflict Resolution* 53(4):496–525.

Sahlins, Peter. 1989. *Boundaries: The Making of France and Spain in the Pyrenees*. University of California Press.

Salehyan, Idean. 2009. *Rebels without borders*. Ithaca, NY: Cornell University Press.

Sambanis, Nicholas, Stergios Skaperdas and William C Wohlforth. 2015. “Nation-building through war.” *American Political Science Review* 109(2):279–296.

Schultz, Kenneth A. 2014. “What’s in a claim? De jure versus de facto borders in interstate territorial disputes.” *Journal of Conflict Resolution* 58(6):1059–1084.

Schultz, Kenneth A. 2017. “Mapping interstate territorial conflict: A new data set and applications.” *Journal of Conflict Resolution* 61(7):1565–1590.

Scott, James C. 2009. *The Art of Not Being Governed: An Anarchist History of Upland Southeast Asia*. Yale University Press.

Senese, Paul D. 2005. "Territory, Contiguity, and International Conflict: Assessing a New Joint Explanation." *American Journal of Political Science* 49(4):769–779.

Shelef, Nadav G. 2016. "Unequal Ground: Homelands and Conflict." *International Organization* 70(1):33–63.

Simmons, Beth A. 2005. "Rules over Real Estate; Trade, Territorial Conflict and International Borders as Institutions." *Journal of Conflict Resolution* 49(6):823–848.

Teitelbaum, Michael S. 2015. "Political demography: Powerful trends underattended by demographic science." *Population Studies* 69(sup1):S87–S95.

Tilly, Charles. 1990. *Coercion, Capital and European States: AD 990-1990*. Cambridge MA: Basil Blackwell.

Timofeev, Oleg Anatolievich. 2003. *Russian-Chinese relations in the Amur region, mid-19th - early 20th centuries*. Blagoveshchensk, Russia.

Tirtosudarmo, Riwanto. 2001. Demography and security: Transmigration policy in Indonesia. In *Demography and National Security*. New York: Berghahn Books.

Toft, Monica Duffy. 2003. *The geography of ethnic violence: Identity, interests, and the indivisibility of territory*. Princeton University Press.

Vasquez, John. 1995. "Why Do Neighbors Fight? Proximity, Interaction, or Territoriality." *Journal of Peace Research* 32(3):277–293.

Vasquez, John A. 1993. *The War Puzzle*. Cambridge, UK: Cambridge University Press.

Vasquez, John and Marie T. Henehan. 2001. "Territorial disputes and the probability of war, 1816-1992." *Journal of Peace Research* 38(2):123–138.

Weidmann, Nils B. 2009. "Geography as Motivation and Opportunity: Group Concentration and Ethnic Conflict." *Journal of Conflict Resolution* 53(4):526–543.

Weiner, Myron and Sharon Stanton Russell. 2001. Introduction. In *Demography and national security*, ed. Myron Weiner and Sharon Stanton Russell. Berghahn Books.

White, Lynn T. 1979. "The road to Urumchi: approved institutions in search of attainable goals during pre-1968 rustication from Shanghai." *The China Quarterly* 79:481–510.

Wich, Richard. 1980. *Sino-Soviet Crisis Politics: A Study of Political Change and Communication*. Cambridge, UK: Cambridge University Press.

Wooldridge, Jeffrey M. 2002. *Econometric analysis of cross section and panel data*. Cambridge, MA: Massachusetts Institute of Technology Press.

Xinjiang, Provincial Government. 1998. *General Chronicles of Xinjiang - Xinjiang Production and Construction Corps*. Vol. 37 Urumchi: Xinjiang People's Publishing House.

Xu, Yiqing. 2017. "Generalized Synthetic Control Method: Causal Inference with Interactive Fixed Effects Models." *Political Analysis* 25(1):57–76.

Yegar, Moshe. 2002. *Between integration and secession: the Muslim communities of the southern Philippines, Southern Thailand, and western Burma/Myanmar*. Lanham, MD: Lexington Books.

You, Lan and Charles Kraus. 2014. Caught in the Split: Chinese Students in the Soviet Union, 1960-1965. Technical report Woodrow Wilson International Center for Scholars.

Zhang, Anfu. 2014. "The Northwestern Frontier during the Sino-Soviet Military Standoff: Xinjiang Production and Construction Corp to Enhance Military Stock." *Contemporary Studies of Chinese History* .

Zubok, Vladislav M. 1959. "Discussion between N.S. Khrushchev and Mao Zedong." History and Public Policy Program Digital Archive, Archive of the President of the Russian Federation (APRF), f. 52, op. 1, d. 499, ll. 1-33, copy in Volkogonov Collection, Manuscript Division, Library of Congress, Washington, D.C. http://digitalarchive.wilsoncenter.org/document/112088.

Appendix

Figures

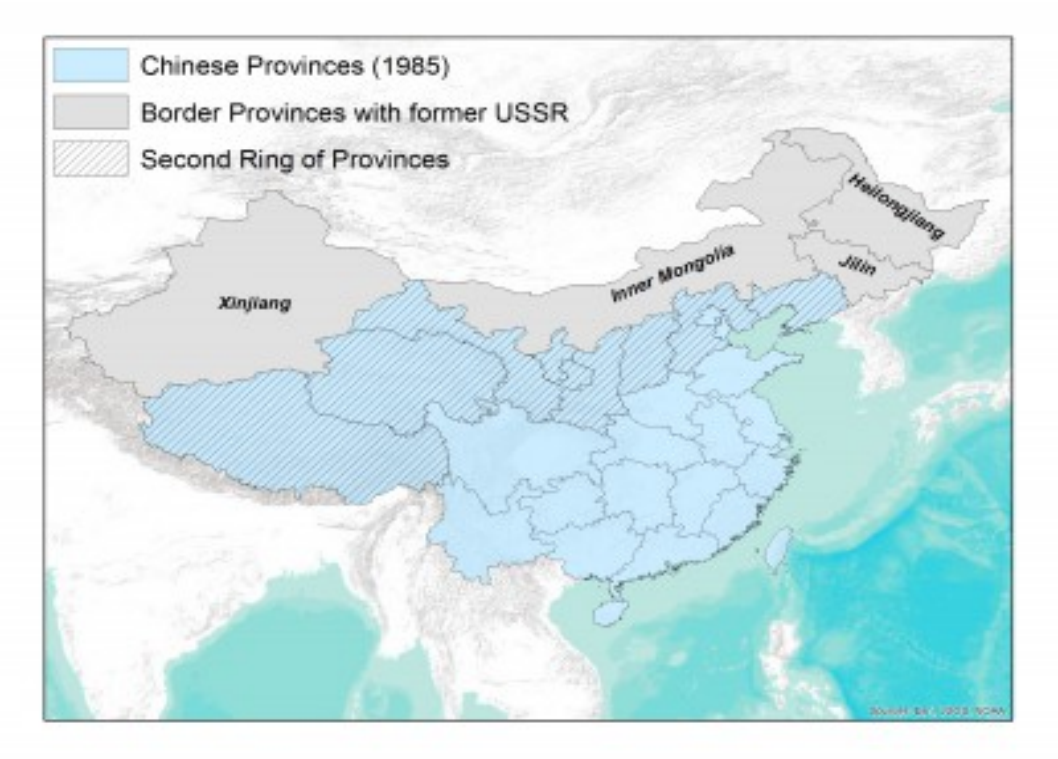

Figure 8: Provinces of the People's Republic of China

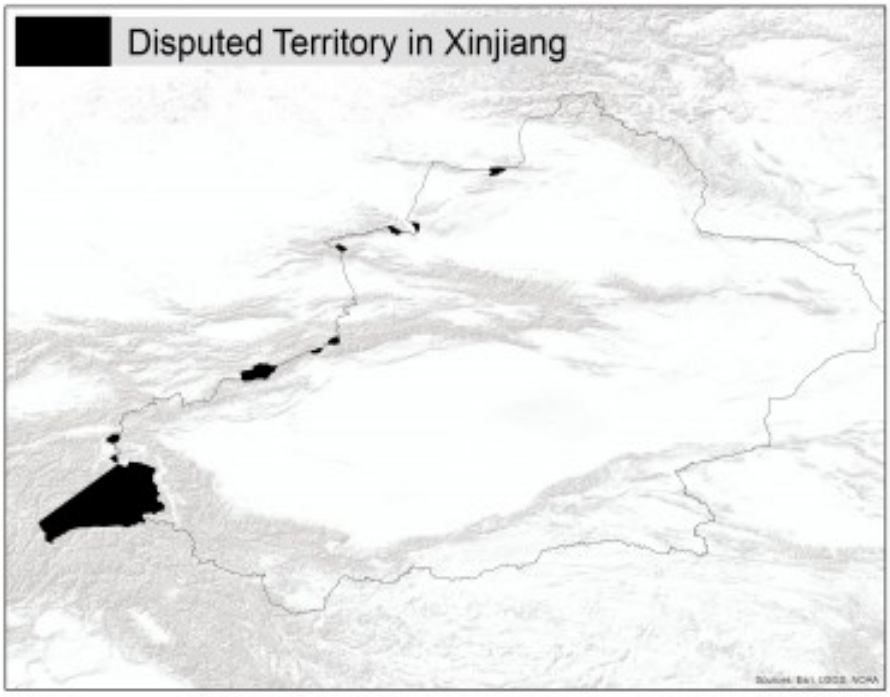

Figure 9: China's historical border disputes (western sector) with the USSR at the outset of the Sino-Soviet split. *Source*: Fravel (2008).

Tables

Summary statistics for Provincial variables

Variable	Mean	St. Dev	Min	Max
Log inward migration	13.15	0.87	9.98	14.92
Log outward migration	13.1	0.89	9.69	14.99
Log net migration	13.95	0.48	0	14.76
Total population (10,000)	2667.55	1808.47	122.8	7847
Border USSR	0.14	0.35	0	1
Sino-Soviet split	0.75	0.43	0	1
GDP index	373.47	311.98	81.7	3,049.6
Primary schools	1395273	1814871	200.16	8635247
Death rate	8.9	4.59	3.77	68.58
Gross industrial output	101.87	129.21	0.12	1036.67
Per capita grain production	383.01	146.25	152.8	1859.12
Per capita grain prod. growth	0 [2]	0.16	-1.53	1.19
Highway length (km)	21211.58	12210.99	1155	59541

Summary statistics for County variables

Variable	Mean	St. Dev	Min	Max
Log Pop. Bingtuan	6.69	4.20	0	13.22
Log Pop. Han %	0.27	0.2	0	0.65
Sino-Soviet split	0.83	0.37	0	1
Northern Xinjiang	0.56	0.5	0	1
Non-natural Border	0.16	0.37	0	1
Non-natural Border Distance	2.59	1.96	0	7.41
Distance to USSR	1.76	1.77	0	7.41
Disputed border	0.15	0.36	0	1
Mean Altitude	0.16	0.08	0.06	0.46
Pop. Russian	22.37	158.7	0	4813
Pop. Kyrgyz	1153.85	4000.02	0	30894
Pop. Uyghur	62733.99	83060.98	0	439198
Pop. Kazakh	8979.46	13572.72	0	97996
Pop. Han	45087.66	84597.84	0	998020
Pop. Hui	4945.53	8917.75	0	50905

Table 10: Summary statistics for the variables used in the county-level empirical specifications

Summary statistics for Russian variables

Variable	Mean	St. Dev	Min	Max
Border China	0.06	0.23	0	1
Sino-Soviet split	0.63	0.48	0	1
Pop. Russian	1485149	1222694	59760	7963246
Pop. Chinese	193.93	535.06	0	6015
Total Pop.	1802280	1325296	99925	8875579

Table 11: Summary statistics for the variables used in the Russian oblast-level specifications

Table 12: Geographic conditions predicting demographic engineering in Xinjiang

Conditions	*Non-Tian Shan Border*	*Tian Shan Border*
Sino-Soviet split	High	Low
Non-Sino-Soviet split	None	None

Table 13: Ethnicity conditions predicting demographic engineering in Xinjiang

Conditions	*Non-Tian Shan border*	*Tian Shan border*
Ethnic Russians	High	Low
Non-Ethnic Russians	None	None

Main Table 3 with covariates reported

	Inward migration		*Net migration*		*Population (10,000)*	
	(1)	(2)	(3)	(4)	(5)	(6)
Sino-Soviet split	0.07***	0.05*	0.02	0.03	−8.63	−14.16**
	(0.03)	(0.03)	(0.02)	(0.02)	(10.88)	(6.32)
Border USSR: Sino-Soviet split	0.14***	0.14***	0.06**	0.11**	35.01***	41.58***
	(0.04)	(0.04)	(0.03)	(0.05)	(12.70)	(9.00)
GDP Index		0.001***		0.001		0.17*
		(0.0002)		(0.001)		(0.09)
Primary schools		0.0000		−0.0000		0.0001***
		(0.0000)		(0.0000)		(0.0000)
Death rate		0.01***		−0.02**		−3.47***
		(0.002)		(0.01)		(0.64)
Grain production per cap		0.0001		0.0001		−0.01
		(0.0001)		(0.0001)		(0.03)
Grain per cap growth		−0.13*		−0.03		−12.98*
		(0.07)		(0.07)		(6.77)
Gross industrial output		−0.001*		−0.002		0.44***
		(0.0004)		(0.002)		(0.16)
Highway length		0.0000		0.0000		0.01***
		(0.0000)		(0.0000)		(0.003)

Table 14: $^{*}p < .1$; $^{**}p < .05$; $^{***}p < .01$ See Table 3 for details

	Generalized Synthetic Control Diff-in-Diff		
Dependent Variable:	Log in-Migration	Log net migration	Total Population
Border USSR: Sino-Soviet Split	0.26**	0.05**	131.3**
	(0.12)	(0.02)	(66.64)
Year fixed effects	Yes	Yes	Yes
State fixed effects	Yes	Yes	Yes
Treated provinces	4	4	4
Untreated provinces	25	25	25
Note:			*p<0.10; **p<0.05 ***p<0.01

Table 15: Each row represents a generalized synthetic control difference-in-differences specification where treatment of territorial threat is determined by the interaction between provincial contiguity with the USSR and the years of the Sino-Soviet split (1959-1982)

Robustness check: The effect of the Sino-Soviet split on provincial migration with a temporal subset and provincial subset

	Post-1979	*Drop Xinjiang, Jilin, Heilongjiang, I. Mongolia*			
	(1)	(2)	(3)	(4)	(5)
Sino-Soviet split	0.09***	0.05*	0.05*	0.06**	0.05*
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Border USSR:Sino-Soviet split	0.10***	0.16***	0.12***	0.15***	0.13***
	(0.03)	(0.03)	(0.04)	(0.04)	(0.04)
First Differences	Yes	Yes	Yes	Yes	Yes
Provincial Controls	Yes	Yes	Yes	Yes	Yes
Provinces	27	26	26	26	26
Observations	154	697	693	693	693
F-statistic p value	0.06	0.00	0.00	0.00	0.00

Table 16: *p $<$ .1; **p $<$ .05; ***p $<$ .01 Each model is a provincial-level first-difference difference-in-differences specification where treatment of geopolitical threat is determined by the interaction between provincial contiguity with the USSR and the years of the Sino-Soviet split. The dependent variable is yearly inward migration. Column (2) drops Xinjiang, Column (3) drops Jilin, Column (4) drops Heilongjiang, and Column (5) drops Inner Mongolia. Standard errors are clustered at the provincial level using Arellano's covariance matrix. F-statistic tests whether the effect of Sino-Soviet split is different across border/non-border provinces

Pooling: The effect of Sino-Soviet split on border/non-border provinces

	Inward migration		*Net migration*		*Population (10,000)*	
	(1)	(2)	(3)	(4)	(5)	(6)
Border USSR	0.11	0.02	0.04	−0.06	−1,284.51***	−739.91***
	(0.27)	(0.21)	(0.03)	(0.07)	(412.07)	(196.47)
Sino-Soviet split	−0.28***	−0.43***	−0.05*	−0.07*	98.71	−323.38***
	(0.04)	(0.07)	(0.03)	(0.03)	(83.77)	(71.55)
Border USSR:Sino-Soviet split	0.22**	0.29***	0.04	0.04	158.05	308.40***
	(0.08)	(0.08)	(0.04)	(0.05)	(98.41)	(75.03)
First Differences	No	No	No	No	No	No
Provincial Controls	No	Yes	No	Yes	No	Yes
Provinces	29	27	28	27	29	27
Observations	910	782	896	782	903	782
F-statistic p-value	0.01	0.00	0.33	0.33	0.11	0.00

Table 17: *p $<$ .1; **p $<$ .05; ***p $<$ .01 Each model is a provincial-level pooling difference-in-differences specification where treatment of territorial threat is determined by the interaction between provincial contiguity with the USSR and the years of the Sino-Soviet split. Standard errors are clustered at the provincial level using Arellano's covariance matrix. F-statistic tests whether the effect of Sino-Soviet split is different across border/non-border provinces

Robustness check: The effect of the Sino-Soviet split on border/non-border provinces limiting sample to first and second rings of contiguity

	Inward migration		*Net migration*		*Population (10,000)*	
	(1)	(2)	(3)	(4)	(5)	(6)
Sino-Soviet split	0.06	0.05	0.03**	0.04***	5.08*	−8.09
	(0.05)	(0.06)	(0.01)	(0.01)	(2.94)	(5.27)
Border USSR:Sino-Soviet split	0.15**	0.13***	0.05**	0.05**	21.30***	29.95***
	(0.06)	(0.05)	(0.02)	(0.02)	(7.18)	(8.75)
First Differences	Yes	Yes	Yes	Yes	Yes	Yes
Provincial Controls	No	Yes	No	Yes	No	Yes
Provinces	11	11	11	11	11	11
Observations	352	352	352	352	352	352
F-statistic p-value	0.01	0.00	0.01	0.01	0.00	0.00

Table 18: *p $<$ .1; **p $<$ .05; ***p $<$ .01 This table replicates the baseline results in Table 1 but limits the sample to provinces in the first and second rings of provinces by contiguity with the former USSR. Each model is a provincial-level first-difference difference-in-differences specification where treatment of geopolitical threat is determined by the interaction between provincial contiguity with the USSR and the years of the Sino-Soviet split. Standard errors are clustered at the provincial level using Arellano's covariance matrix. F-statistic tests whether the effect of Sino-Soviet split is different across border/non-border provinces

Diff-in-diff: The effect of the Sino-Soviet split on % minority in border and non-border provinces 1953-1982

	Log % Minority			
	(1)	(2)	(3)	(4)
Border USSR	1.72***		2.73***	
	(0.53)		(0.37)	
Sino-Soviet split	0.18		2.92**	
	(0.12)		(1.09)	
Border USSR:Sino-Soviet Split	−0.46***	−0.28***	−1.37***	−0.25***
	(0.14)	(0.09)	(0.44)	(0.04)
First differences	No	Yes	No	Yes
Provincial Controls	No	No	Yes	Yes
Provinces	28	28	26	26
Observations	55	55	41	41
F-statistic p value	0.00	0.00	0.00	0.01
Note:				*p<0.1; **p<0.05; ***p<0.01

Table 19: Each model is a two-period difference-in-differences specification where the DV is the log of provincial proportion that is Han in 1953 and 1982. Standard errors are clustered at the provincial level using Arellano's covariance matrix. F-statistic tests whether the effect of Sino-Soviet split is different across border/non-border provinces

Pooling: The effect of the Sino-Soviet split on XPCC (*bingtuan*) settler population and % Han in Xinjiang counties by border distance 1952-1985

	Log Pop XPCC			*Log % Han*		
	(1)	(2)	(3)	(4)	(5)	(6)
Sino-Soviet Split	3.04***	3.79***	5.18***	0.03***	0.05***	0.08***
	(0.47)	(0.33)	(0.36)	(0.01)	(0.01)	(0.01)
Northern Xinjiang:						
Sino-Soviet Split	1.65***			0.04***		
	(0.57)			(0.01)		
Non-natural Border:						
Sino-Soviet Split		1.03**			0.04***	
		(0.51)			(0.01)	
Non-natural Border Dist.:						
Sino-Soviet Split			−0.48***			−0.01***
			(0.14)			(0.002)
First Differences	No	No	No	No	No	No
Counties	80	80	80	80	80	80
Observations	1175	1175	1175	1896	1896	1896
Note:						*p<0.1; **p<0.05; ***p<0.01

Table 20: Each model is a pooling difference-in-differences specification where the DV is the log of Xinjiang county XPCC (*bingtuan*) population or the percentage of the county that is Han between 1952-1985. Standard errors are clustered at the county level using Arellano's covariance matrix.

1

Diff in diff: The effect of the Sino-Soviet split on XPCC (*bingtuan*) and % Han in counties by overlapping border claim 1952-1985

	Log Pop XPCC		*Log Han %*	
	(1)	(2)	(3)	(4)
Overlapping claim		0.80		−0.01
		(1.15)		(0.05)
Sino-Soviet split	3.36***	3.97***	0.08***	0.05***
	(0.28)	(0.31)	(0.01)	(0.01)
Overlapping claim:				
Sino-Soviet Split	0.28	−0.05	0.02	0.02
	(0.86)	(0.83)	(0.02)	(0.01)
First Differences	Yes	No	Yes	No
Counties	80	80	80	80
Observations	1175	1175	1896	1896
Note:		*p<0.1; **p<0.05; ***p<0.01		

Table 21: Each model is a pooling difference-in-differences specification where the DV is the log of Xinjiang county XPCC (*bingtuan*) population or the percentage of the county that is Han between 1952-1985. The independent variable Overlapping claim is a binary indicator for whether a county has an overlapping territorial claim with the USSR. Standard errors are clustered at the county level using Arellano's covariance matrix.

Diff in diff: The effect of the Sino-Soviet split on Russian population in Russian oblasts by population Chinese 1939-1989

	Pop. Russian		*Total Pop.*	
	(1)	(2)	(3)	(4)
Pop. Chinese	−89.074	−124.581	−87.321	−168.993
	(65.630)	(95.403)	(72.151)	(103.637)
Sino-Soviet Split	−83,686.400*	−247,387.700***	−92,541.810*	−304,289.700***
	(43,419.210)	(51,584.180)	(48,041.130)	(56,547.010)
Pop. Chinese: Sino-Soviet Split	37.131	707.274***	35.669	788.590***
	(56.818)	(149.566)	(66.121)	(173.788)
First differences	Yes	No	Yes	No
Oblasts	77	77	77	77
Observations	298	298	298	298
Note:				*p<0.1; **p<0.05; ***p<0.01

Table 22: Each model is a difference-in-differences specification where the unit of analysis is the Russian oblast in the former Soviet Union and the DV is demographic change as measured in five Soviet censuses (1939-1989). Standard errors are clustered at the county level using Arellano's covariance matrix.