

The Grass is Always Greener on the Other Side: Transnational Ethnic Inequality and Ethno-nationalist Conflict

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Journal of Peace Research, Forthcoming

Abstract

Existing research has shown that horizontal inequalities arising from comparisons between ethnic groups can promote ethno-nationalist conflict. However, these studies have largely focused on comparison between groups within the same country. In this paper, we extend this perspective and study comparisons with kin groups abroad and how they affect the risk of ethnic civil war. In particular, we address the fact that many groups have several kin groups abroad, all of which could serve as reference points for comparison. Drawing on insights from social psychology, we argue that the comparisons made with different groups involve distinct motivations, which can yield varying degrees of motivations related to the outbreak of ethno-nationalist conflict. Our results suggest that comparisons with kin groups abroad—especially the *best* (most well-off) groups, as well as the *nearest* or *median* groups—are salient in increasing the propensity for conflict incidence. Moreover, groups that are relatively well off and thus prone to *downward* comparisons, especially when the group is wealthier than all of its transnational kin groups, are much less likely to fight. A novel finding emerges: relative poverty in comparison with transnational kin does not appear to exacerbate the potential for conflict, but relative wealth does appear to attenuate it.

Keywords: ethnic conflict, transnational inequality, social comparison, trans-border kin

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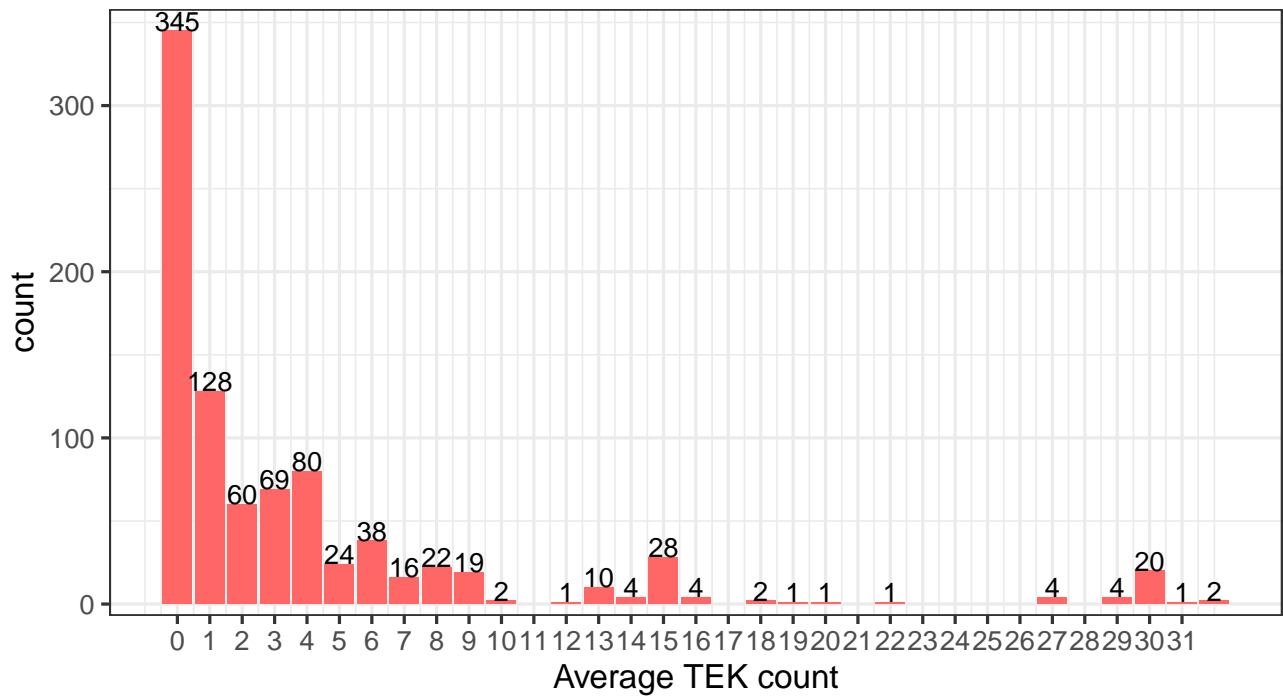
Introduction

In the public discourse and in the study of politics, the problem of inequality looms large. Inequality is particularly concerning as a contributor to political violence, as it is a common refrain by armed groups mobilizing for civil war. Scholarship has shown that political and economic inequalities between ethnic groups—horizontal inequalities—facilitate group grievances, which can trigger ethno-nationalist civil wars through a process of group comparison and group mobilization (Bormann et al., 2021; Cederman et al., 2011). In a nutshell, the relative (lower, or sometimes higher) socio-economic status and political empowerment of groups with respect to other groups shapes the outbreak of violence. For this mechanism, social comparisons between groups are central (Condon and Wichowsky, 2020; Corcoran et al., 2011; Festinger, 1954).

In the vast majority of studies so far, the reference groups for these comparisons have been limited to the same country. This is too narrow, since it misses the possibility that groups compare themselves with other groups residing abroad, which can also generate grievances for rebellion (Weidmann, 2015). This is particularly the case when an ethnic group was partitioned into two or more countries. According to Siroky and Hale (2017:117), over two thirds of the groups in the Minorities at Risk (MAR) Project and about half of the groups in the Ethnic Power Relations (EPR) data have kin groups in neighboring countries (Cederman et al., 2013). For example, the Uighurs in the Xinjiang Autonomous Region in China have kin in former Soviet Central Asia and Turkey. Thailand’s Malay Muslims in Malaysia and the Madhesi minority in Nepal have transnational kin in India. Such kin groups can serve as reference points for transnational group comparisons and thereby intensify grievances (Han et al., 2014; Nayak, 2011).

While there is some evidence that differences in the economic status of groups and their international kin are related to political violence (Han et al., 2014), this effect remains to be further explored. Most importantly, many groups have *several* kin groups abroad, each of which can affect the group’s perceived grievances and therefore its likelihood to fight. In fact, as illustrated in Figure 1, almost half of the ethnic groups with transnational kin have *multiple* kin connections to other countries.

Figure 1. Distribution of the number of transnational ethnic kin groups in the Ethnic Power Relations data



Total groups: 886

Distribution is averaged over all years (1992-2020) that a group is present in the sample.

If a group has several kin groups abroad, all of them are potential candidates for comparison. Which of them are those that a group considers the most relevant? Maybe geographic proximity serves as the main heuristic guiding the comparison, and groups tend to look primarily at those kin groups residing nearby. Alternatively, kin groups for comparison could be selected according to their economic status. For example, groups could be comparing themselves to the poorest among their kin group, or conversely, to the richest one. Furthermore, we expect the type of comparison to matter for the likelihood of ethnic rebellion. Groups might be doing relatively well when using some comparisons but not others. For example, members of a group with middling economic resources might perceive their status to be satisfactory when compared to poorer kin groups, but unsatisfactory when compared to the wealthiest kin group or to a nearby kin group that is perceived to be better off.

While our argument applies to both comparisons of economic as well as political horizontal inequalities, we focus on the economic comparisons that groups make with their cross-border ethnic kin. Comparisons of relative political exclusion from one political system to potentially different political systems in neighboring states are less straightforward, to both the kin-group members and the researcher, than relative comparisons of economic wealth.¹ In our analysis below, we explore these different types of comparison, and test how they relate to the likelihood of armed conflict.

For our empirical analysis, we use geocoded data from the EPR family of data sets together with nighttime lights emissions data from satellites to create measures of transnational coethnic inequality for 350 groups with at least one trans-border kin group (Vogt et al., 2015). We assess the extent to which transnational coethnic inequality shapes the propensity for ethnic conflict. Our results suggest that comparisons with kin groups abroad—especially the *best* (most well-off) groups, as well as the *nearest* or *median* groups—are salient in increasing the propensity for conflict incidence. Moreover, groups that are relatively well off and thus prone to *downward* comparisons, especially when the group is wealthier than all of its transnational kin groups, are much less likely to fight. A novel finding emerges: relative poverty in comparison with transnational kin does not appear to exacerbate the potential for conflict, but relative wealth does appear to attenuate the potential for conflict.

Inter-group comparisons, inequality and ethnic conflict

A rich and growing literature has found that intergroup inequality serves as a foundation for much of the ethno-nationalist conflict around the world. Earlier work considers how intergroup inequality contributes to perceived grievances and fears of domination, which, in turn, lead to ethno-nationalist civil war (Gurr, 2000; Horowitz, 1985). Building upon early empirical work on ethnic grievances and civil war, the more recent literature has developed new measurement

1. For example, although there is some evidence that the relative size of a transborder kin group can shape the way in which its politically excluded coethnic group is treated by the government of that excluded coethnic group, existing scholarship does not find that the status of a transborder kin group as simply included (or excluded) significantly alters the risk of civil war (Cederman et al., 2013:404).

techniques to operationalize horizontal inequalities and revealed strong effects on the likelihood of armed conflict (Buhaug et al., 2014; Cederman et al., 2011). As this literature shows, intergroup comparisons *within states* are a central component of the posited mechanism that connects horizontal inequalities to armed intrastate conflict. However, the exclusive focus on domestic groups may be too limited. Social interaction theory tells us that groups' interactions do not stop at national boundaries (Festinger, 1954; Tajfel, 1974; Thibaut, 2017). Ethnic groups not only compare themselves with different domestic groups, but also with groups that share a common culture, language, or origins. For instance, extending the within-state comparison framework, Han et al. (2014) specifically focus on the economic comparison between ethnic groups and their external kin groups. They find that a group's economic disparity relative to an external kin group can increase the ethnic group's perceived grievances, thereby increasing the likelihood of violent mobilization. In this sense, transnational ethnic kin are likely to be especially important bases for comparison as groups form a sense for their level of (dis)advantage.

Despite the fact that international comparisons between ethnic groups and their kin groups are frequent and likely, existing work has not yet explored how groups choose their basis of comparison when multiple kin groups exist. If group comparison is an essential mechanism of ethnic mobilization—as the literature has shown—then choosing with whom to compare and with what standards to compare should directly affect the outcome of their comparisons (Condon and Wichowsky, 2020; Corcoran et al., 2011; Dunning and Hayes, 1996). In other words, depending on which group is the reference, international comparisons can yield completely different expectations for the same group. We thus depart from existing work and particularly focus on the impacts of different types of international comparison on the likelihood of ethnic conflict.

Our approach is derived from the social-psychological study of group comparisons. That is, political, social, and economic status and inequality are treated essentially as *relational*, and groups continuously make sense of relational phenomena by comparing themselves to others at the individual level or the group level—regardless of whether they compare to in-group or out-group members (Fiske, 2011; Guimond, 2006; Martinot and Redersdorff, 2006).

Through these social comparisons, when ethnic groups perceive their cross-border kin to be enjoying ‘greener grass,’ their grievances against the central state will be relatively strong, along with their desire for autonomy and/or merger with their coethnic brethren. As a consequence, the ethnic groups may also feel compelled to *blame* their central governments for hampering the groups’ chances for political and economic development as realized by their external kin (Han et al., 2014). Unlike horizontal inequalities within states where the government is more straightforwardly blamed for a group’s political rather than economic disadvantages, a group conducting international comparisons is likely to blame its central government for both political and economic disadvantages—attributing the relatively advantaged position of its kin to factors related to their government at home. Such a social-psychological impact can reinforce the perceived grievance of a group (Condon and Wichowsky, 2020), thereby increasing the risk of civil war.

At the same time, transnational comparisons that suggest that the grass is *not* greener for kin groups—when groups are relatively well off compared to their kin—will tend to ameliorate the potential for conflict. Contentment with the status quo economic and political conditions will grow as groups perceive transnational kin groups to be facing even greater struggles. Based on this basic argument, we start with a base hypothesis, which posits a relationship between external kin-group comparisons and armed conflict. We then consider explanations for how some comparisons might matter differently than others.

Hypothesis 1: A group with a kin group abroad is more (less) likely to be involved in conflict against its government if it has a lower (higher) level of economic performance as compared to its kin group.

Built on the social comparison theory from social psychology literature, we argue that ethnic groups have multiple ways to assess their economic performance relative to transnational kin groups (Corcoran et al., 2011). Comparing themselves with other kin groups can serve multiple motives, such as self-evaluation, self-enhancement, self-improvement, and equity, and more importantly, these motives need not be mutually exclusive (Corcoran et al., 2011; Zagefka and Brown, 2006). As a result, even groups with the exact same objective status may assess very

differently their relative standing and how they would like to respond to these differences (Condon and Wichowsky, 2020). The social psychology literature has shown that motives can drive comparison choices concerning whether groups engage in lateral, upward or downward comparison, which then can induce varying perceptions of a group’s own status and deprivation relative to the reference group. Exposure to these perceived inequalities therefore can further increase the desire for redistribution and the legitimacy of violent mobilization against the government (Condon and Wichowsky, 2020; Dyrstad and Hillesund, 2020; Sands, 2017). We first consider lateral comparisons and then turn to how upward and downward comparisons can shape group grievances.

Lateral comparisons

As one mode of evaluation, lateral comparison emphasizes that similarity on critical dimensions and related attributes can provide helpful, accurate information (Festinger, 1954; Wheeler et al., 1982). In this sense, an ethnic kin group is an ideal reference group for an accurate evaluation due to common cultural background and assumed similarity in psychological closeness (Han et al., 2014:53). Nevertheless, the worldwide spread of ethnic kin also indicates significant variations among coethnic groups. For a meaningful evaluation, nearby kin groups should provide more accurate information on relative performance than remote kin groups do. Therefore, we argue that *geographic proximity* helps the ethnic group gather information on the relative economic performance of its nearby kin group. In light of this logic, we thus consider each group’s standing vis-à-vis the *nearest* kin group as our first type of comparison.

We also consider the potential for groups to make comparisons across multiple groups at the same time as an alternative type of lateral comparison. In this case, we use the ‘*median group*’ as its reference group, which, importantly, is also in line with Han et al. (2014).²

Hypothesis 2: The impact of a comparison between an ethnic group and its external kin on

2. In most cases, the ‘median group’ is equivalent to the ‘average group’ in our data. We use median group to account for extreme values in situation where a group has both very rich and very poor kin groups.

the likelihood of conflict should be especially strong when the comparison is made to the nearest or median kin group.

Upward and downward comparisons

Downward and upward comparisons can shape the potential for conflict via distinct mechanisms, especially when the groups are under threat (e.g. marginalized, excluded, etc.). [Taylor and Lobel \(1989\)](#) find that downward comparison can ameliorate self-esteem, while upward comparison can enable a person to improve his or her situation and simultaneously increase aspirations. By comparing with other groups judged to be better off, upward comparison enhances motivation for improvement. In other words, when groups select a kin group as a point of reference that is better than themselves, they observe that superior standards are attainable by like groups and become motivated to improve performance.

Under upward comparison, a group's grievance may be augmented, making members feel worse even if the group is performing relatively well. If a transnational kin group has been able to achieve high levels of wealth, then a group might perceive its own access to economic resources as especially dismal—far from the aspirations being realized by its transnational kin. For example, [Siroky and Hale \(2017\)](#) argue that a group is more likely to perceive greater grievances and status inconsistency when its kin group in another country is near economic parity with other groups in its own state, indicating that upward comparison can engender more perceived grievances. A group is especially likely to perceive stark relative deprivation if it is poorer than (looking up at) the transnational kin group that is least well off—its benchmark for maximal deprivation.

Downward comparison concentrates on the need for enhancement, so groups tend to select inferior standards in order to maintain a positive self-view when comparing with other groups that are deemed not as good as themselves. In other words, when a group pursues self-enhancement, what matters more is not the accurate information of itself relative to its kin group, but the

information that would help maintain a positive self-image ([Wills, 1981](#)).³ The potential for downward comparison to contribute to positive self image should be strongest when the group is wealthier than all the other kin groups and compares itself to the wealthiest of the other groups—when a downward comparison is not competing with potential upward comparisons. The more that a group is wealthier than the best-off kin group, the more that positive self-image will be enhanced.

In a nutshell, groups will tend to feel worse about themselves when they make an upward comparison to transnational kin, especially when they are worse off than all their kin groups. Groups will tend to feel better when they compare with poorer (downward comparison) kin, especially when there is considerable downward distance between the group and the wealthiest kin group. Upward comparisons are more likely to activate a strong sense of grievance, while downward comparisons are more likely to activate a sense of contentment with the status quo. Both are pathways by which transnational comparisons could shape the propensity for ethnic conflict.

For example, the situation between Myanmar central government and Kachin Independence Army (KIA), which experienced a conflict from 2011 to 2013, reveals the importance of grievances generated from upward trans-border comparison in ethnic mobilization and rebellion. As one of the main ethnic minority groups in Myanmar, the Kachin also have a trans-border ethnic kin, the Jingpo, who are residing in the Yunnan Province of China ([Baird and Cansong, 2017](#); [Schmidt-Leukel et al., 2021](#)). The majority of Jingpo have been living in the Dai-Jingpo Autonomous Prefecture (Dai-Jingpo AP) of Yunnan province since 1953. At present, more than ten roads connect Dai-Jingpo AP to Myanmar, which facilitates the inter-group comparison between the Kachin and Jingpo, making two kin groups along the Sino-Myanmar border aware of each other's living conditions. Since the opening up of the border for trade in 1988, many Kachin have

3. Downward comparison also points to a temporal comparison as a part of an enhancement dynamic. [Redersdorff and Guimond \(2006\)](#) distinguish two types of temporal self-comparisons: when the past is compared to the present, and when the present is compared to the future. Both the reflection on the past and the anticipation about the future of the group status can reinforce the perception of a group's status resulting from downward comparison.

witnessed the rapid ‘development and prospering of all towns on the China side of the border, while the Kachin side has been hugely left behind’ (Dean, 2005:823). They also came to realize that ‘whatever pairs of border cities you look at, you find the foreign [Chinese] border cities more developed and richer than the Burmese counterparts’ (Dean, 2005:824). In this context, many Kachin women who were attracted by higher economic prospects and social stability on the China side have migrated to Dai-Jingpo AP and married local Jingpo residents (Xu et al., 2014). While the political exclusion and cultural alienation from the center of Myanmar government have generated much of the Kachin’s grievance to rebel, their relative poverty in comparison with their external Jingpo kin in China has certainly intensified their dissatisfaction with the center and therefore contributed to their continuing resistance to Myanmar’s central government.

By contrast, the case of Inner Mongolia in China exemplifies how downward comparison can help mitigate grievances from inter-group comparison. Established in 1947, Inner Mongolia Autonomous Region (IMAR) is one of China’s five autonomous regions. However, in contrast to Tibet and Xinjiang (Cao et al., 2018; Starr, 2015), Inner Mongolia has not demonstrated significant political mobilization for greater autonomy. According to Han (2011), one of the reasons that Inner Mongolia has not mobilized has been the sharp contrast in economic conditions between IMAR and Mongolia (i.e., historically called ‘Outer Mongolia’). After the collapse of the Qing Dynasty, Outer Mongolia sought independence and established the Mongolian People’s Republic (MPR) in 1924, which was then incorporated into the Soviet sphere of influence until 1991. However, MPR today remains a poor and less developed country while the IMAR is one of the more economically developed provinces in China with annual GDP per capita of US \$14,343 in 2022, which is more than five times that of IMAR’s.⁴ As a result, the perception of better living conditions in IMAR have made the Inner Mongols less anxious about their economic prosperity and opportunities (Han, 2011), which in turn mitigates their political will for greater autonomy in the way the Tibetans and the Uighurs have sought in recent decades.

4. See <https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?lang=ca&locations=MN> and <https://www.statista.com/statistics/1093637/china-per-capita-gross-domestic-product-gdp-of-inner-mongolia/>.

Based on these discussions, we propose our third hypothesis:

Hypothesis 3a: The impact of a comparison between an ethnic group and its external kin on the likelihood of conflict should be especially strong when the group makes an upward comparison to the worst-off kin group.

Hypothesis 3b: The impact of a comparison between an ethnic group and its external kin on the likelihood of conflict should be especially strong when the group makes a downward comparison to the best-off kin group.

It is worth noting that while the hypotheses provide observable implications for different mechanisms by which transnational kin comparisons could matter, the mechanisms are not mutually exclusive. We do not make specific predictions about whether groups are particularly inclined to one or the other forms of comparison. There are insufficient theoretical priors to form expectations regarding how comparisons, say, to the nearest groups perform relative to comparisons to the median groups. We also note the possibility that these types of comparison are easy to be subjected to elite manipulation. For example, the dominant narratives by political elites can prompt groups to avoid thinking about upward comparison when they feel threatened and insecure (Condon and Wichowsky, 2020), thereby producing a conflict-mitigating effect for international comparison.

Moreover, in line with other inequality literature, our theory does not predict that transnational inequality can only be a trigger of conflict *onset*; transnational comparison can also more generally increase the propensity for ethnic rebellion *incidence*. As a result, in the subsequent analyses, we focus on whether international comparison is associated with both risk of conflict onset as well as conflict incidence. In comparing and contrasting the models of onset with the models of incidence, we can specifically tease out the mechanisms by which unfavorable comparisons catalyze conflict (upward, onset), the mechanisms by which unfavorable comparisons prolong conflict (upward, incidence), the mechanisms by which favorable comparisons prevent conflict (downward, onset), and the mechanisms by which favorable comparisons make conflict attenuation possible (downward, incidence).

Research design

Dependent variable

Our unit of analysis is *group-year*, and we include all politically relevant groups in the EPR dataset from 1992 to 2020.⁵ The dependent variable is *ethnic conflict onset* and *ethnic conflict incidence* (Gleditsch et al., 2002; Wucherpfennig et al., 2011, 2012). The EPR dataset measures whether an ethnic group has a link to a rebel organization that was actively involved in a conflict in a given year. We exclude groups that are not politically relevant, as well as those which are in *dominant* or *monopoly* positions as they, by definition, cannot fight against themselves.⁶ Our dependent variable for conflict onset takes the value of ‘1’ for group-years in which a group experienced conflict onset, and ‘0’ for all other years.⁷ Likewise, our dependent variable on ethnic conflict incidence is a binary indicator of whether a group experienced a conflict with the government in a given year. The use of the *group-year* level of analysis along with the EPR data set also enables us to improve upon the research design by Han et al. (2014) by avoiding potential sample selection bias associated with the MAR data, as well as not being limited to a static, one-shot comparison.

Given the binary nature of our dependent variable, we estimate logistic regression models. We estimate standard errors that are robust to clustering by groups in all models. In the subsequent robustness checks, we also use a simple linear probability model, a two-way fixed-effects model, and a multilevel logistic regression model as alternative modeling strategies.

5. All data related to ethnic groups are from the 2021 version of the *GROW^{up}* Platform, see Vogt et al. (2015) and Girardin et al. (2015).

6. The remaining cases include those coded as senior partner, junior partner, self-exclusion, powerless, and discriminated.

7. Note that if a given group has been involved in any conflict in the previous two calendar years, the onset variable will be censored, as it is unlikely to have positive conflict onset in these years.

Measuring cross-border kin comparisons

The key independent variables are the measures of economic inequality between the group in question and its trans-border ethnic kin (TEK) group(s). Because of the way we operationalize our key independent variables, our group-level analysis focuses on ethnic groups with at least one TEK group. To identify an ethnic group’s TEK groups, we rely on the Trans-border Ethnic Kin (EPR-TEK 2021) dataset (Cederman et al., 2013), which ‘records all politically relevant ethnic groups living in at least two countries, i.e. ethnic groups with transnational ethnic connections and whose settlement area is split by an international border’ (Vogt et al., 2015).⁸ Our sample consists of a total of 349 EPR groups from 126 countries with at least one kin group abroad during the period from 1992 to 2020.

Following a similar logic of the operationalization of horizontal inequality within a state’s borders as in Cederman et al. (2011), we use a simple measure to capture transnational comparisons of groups’ economic performance. More specifically, for transnational economic inequality, we use the logarithmized ratio between the groups’ GDP per capita,⁹ that is

$$\text{Transnational inequality}_{i,j,t} = [\log(\frac{g_{i,t}}{g_{j,t}})] \quad (1)$$

where $g_{i,t}$ denotes the ethnic group i ’s GDP per capita at year t , and $g_{j,t}$ denotes the GDP per capita of i ’s TEK group j at year t . We use the log of the ratio to mitigate measurement errors resulting from nighttime lights and small group populations. Therefore, larger positive values of this measure mean that the ethnic group i is relatively richer compared to its kin group j .

As Weidmann and Schutte (2017) point out, attaining comparable group-level economic data across the globe and over a long time period faces obvious challenges. Previous research relies on

8. The EPR-TEK dataset uses a nominal matching of all ethnic groups included in the core EPR dataset to identify trans-border ethnic groups. In this sense, groups in two different countries are coded as trans-border kin if they share the same ethnographic name, including synonyms.

9. Han et al. (2014) use the ratio of the group’s GDP per capita to its kin group. Our measure not only considers the ratio, but also accounts for the skew of the distribution of the variable. We use the linear rather than the squared form of inequality because we are particularly interested in whether the effects of transnational inequalities on ethnic territorial and governmental conflicts will be distinct for relatively poorer vs. wealthier groups.

proxy measures. For example, Cederman et al. (2011) mainly rely on Nordhaus’s G-Econ data by overlaying the GeoEPR polygons indicating group settlement onto the cells in the G-Econ data (Nordhaus, 2006). Cederman et al. (2015) supplement the G-Econ data with nighttime lights emissions as well as survey-based estimates. We follow Cederman et al. (2015) and use the nighttime lights emissions in geographic space dominated by each group as a proxy for the total economic output related to each group.¹⁰ Light emissions are highly accurate predictors of relative economic wealth estimates and are increasingly popular in the study of political violence (Weidmann and Schutte, 2017). Because nighttime light data are only available for groups with concentrated settlement areas, we exclude groups with dispersed settlement patterns as identified in the EPR data set.

We also estimate the annual population of the ethnic groups in order to compute a measure of group wealth that is analogous to GDP per capita at the ethnic group level. Since population data for ethnic groups in the *GROW^{up}* platform are only available for 1990, 2000, and 2010, we follow previous researchers and use polynomial interpolation to create yearly observations based on these three snapshots of the time period (Cederman et al., 2015). Together with the nighttime light proxy, we then create group-level GDP per capita over time.

To test our hypotheses on the effects of different types of cross-border kin comparison on the likelihood of ethnic conflict, we separate the different types of comparison into four categories: the *nearest TEK group* (the TEK group that lives closest to the group among all other TEK groups), the *median TEK group* (the TEK group that has the median level among all kin groups abroad), the *best TEK group* (the TEK group that is doing best among all kin groups abroad), and the *worst TEK group* (the TEK group that is doing worst). As Figure 1 shows, the number of TEK groups varies from 0 to 32 in the EPR-TEK 2021 dataset, and around 78% of the EPR groups on average have no more than five kin groups abroad.¹¹ To identify the *nearest*

10. Data on nighttime lights are available from the *GROW^{up}* Platform (Girardin et al., 2015) and can be downloaded from <https://www.ngdc.noaa.gov/eog/dmsp.html>.

11. Note that the types of TEK groups are not all mutually exclusive. As a result, these four types of comparison may have substantial overlap.

TEK group, we leverage the GeoEPR polygon’s centroid coordinates to calculate the great-circle distance between the ethnic group and each TEK group. Once we obtain pairwise distances, we select the TEK group with the shortest distance. For the *median TEK group*, we compare the GDP per capita among all of a group’s TEK groups abroad, and pick the one with the median value.

To identify the *best* TEK groups, we compare the GDP per capita among all of a group’s TEK groups abroad and pick the one with the highest value.¹² Likewise, the group with the lowest one is selected as the *worst TEK group*.¹³

After identifying the different comparison groups, we use *Equation (1)* to calculate our transnational economic inequality for each of them. Hypotheses 3a and 3b posit expectations that are specific to upward comparisons to the worst group and downward comparisons to the best group respectively. To test these hypotheses, we measure transnational inequality *asymmetrically* with two variables that correspond to groups that are poorer and wealthier than their trans-border kin groups, respectively:¹⁴

$$Relative\ poverty = \begin{cases} \log\left(\frac{g_{i,t}}{g_{j,t}}\right) & \text{if } g_{i,t} < g_{j,t} \\ 0 & \text{otherwise} \end{cases} \quad (2)$$

$$Relative\ wealth = \begin{cases} \log\left(\frac{g_{i,t}}{g_{j,t}}\right) & \text{if } g_{i,t} > g_{j,t} \\ 0 & \text{otherwise} \end{cases} \quad (3)$$

This operationalization makes sure the deviations from the TEK group are always positive numbers above 0. These new variables can distinguish between degrees of poverty (upward comparisons) and situations of relative superiority (downward comparisons) compared to the

12. In cases in which the group under observation is the wealthiest of all the kin groups, the comparison with the best group is really a comparison with the second-richest group of that kin type.

13. In cases in which the group under observation is the poorest of all the kin groups, the comparison with the worst group is really a comparison with the second-poorest group of that kin type.

14. For similar operationalizations, see [Lacina \(2015\)](#) and [Cederman et al. \(2011\)](#). This analysis more specifically isolates the impact of upward versus downward comparisons, since comparisons to the ‘best’ groups are not necessarily upward—when the group under observation is the wealthiest group—and the comparisons to the ‘worst’ groups are not necessarily downward—when the group under observation is the poorest group.

comparison group. A positive coefficient on *relative poverty* would suggest the poorer the group relative to its TEK group, the more likely that group will be involved in ethnic conflict; a negative coefficient on *relative wealth* would suggest the wealthier the group relative to its TEK group, the less likely that group will be involved in ethnic conflict.

Control variables

We control for a number of group-level and country-level variables. At the group level, we first control for the *horizontal inequality* of the ethnic group relative to the national average within the country, measured as the logarithmized difference between the group's GDP per capita and the average GDP per capita of all groups in the country. In contrast to previous work that uses the squared term of the logarithmized difference (Cederman et al., 2011), we only use the linear term of this variable.¹⁵ Second, previous work has shown how the (relative) size of the group can affect civil war onset (Cederman et al., 2013; Siroky and Hale, 2017). We thus control for the *relative group size*. Third, we control for the political status of the ethnic group because political inequalities can contribute to economic inequalities and conflict, and are therefore likely to confound the relationship we test. The dichotomous variable, *excluded*, measures whether the ethnic group was politically excluded based on the EPR's distinction between excluded and included groups. Fourth, we use a dummy variable of *downgraded* to measure whether the group suffered a loss of power in terms of EPR's status categories during the previous two years. Fifth, we control for the *experience of previous rebellions* that the ethnic group has experienced since 1946 or the independence of the country. All the data on these control variables are from the *GROW^{up}* Platform.

At the country level, we control for the total population and the GDP per capita of the country. The *population* and *GDP per capita* variables are then logarithmized, and are taken from the World Bank's development Indicators (World Bank Group, 2022). Finally, in order

15. See our explanation in footnote 9.

to correct for temporal dependence, we use a cubic polynomial (t , t^2 , and t^3) transformation of the number of *peace years* since the previous civil conflict at the group-year level (Carter and Signorino, 2010).

Results and discussion

Main results

We start by examining the effects of the types of transnational comparison of economic performance on the likelihood of ethnic conflict. The main regression results are summarized in Table 1. Due to the operationalization of *transnational inequality*, a negative (positive) coefficient implies that the richer the group relative to its TEK group, the less (more) likely the group will be involved in ethno-nationalist conflicts. While the coefficients for transnational inequality in Models 1-4 are not statistically significant at the 95% confidence intervals for *ethnic conflict onset*, the signs for the nearest, median and best TEK groups are in the expected direction. However, when we consider *ethnic conflict incidence* as our dependent variables in Models 5-8 of Table 1, we find that the coefficients are negative and statistically significant at the 99% confidence intervals for the nearest, median and best TEK groups. These findings lend evidence for our hypothesis that trans-border comparisons are important sources of group grievances (Hypothesis 1). We also see evidence that lateral comparisons to the nearest and median groups are meaningful (Hypothesis 2). While the finding that pertains to the comparisons with the best groups is consistent with Hypothesis 3b, we explore that further below.

To make more compatible comparisons for the effects of transnational inequality across logistic regression models, we calculate their average first-difference in predicted probabilities (i.e., marginal effects) over 1,000 simulations using an observed-value approach (Hanmer and Kalkan, 2013). In each simulation, we hold all other covariates at each case's observed values, generate the marginal effects for each case by varying the value of transnational inequality from its minimum to maximum value, and then average over all observations. That way, we obtain an estimate of the 'average effect in the population.'

Table 1. Logistic regression results for ethnic conflict (1992-2020)

	DV: Conflict Onset				DV: Conflict Prevalence			
	M1:Best	M2:Worst	M3:Median	M4:Nearest	M5:Best	M6:Worst	M7:Median	M8:Nearest
Transnational inequality	-0.068 (0.065)	0.029 (0.071)	-0.086 (0.078)	-0.058 (0.080)	-0.120** (0.051)	-0.015 (0.055)	-0.149** (0.062)	-0.157** (0.064)
TEK status excluded	0.225 (0.238)	0.064 (0.257)	0.482 (0.235)	0.186 (0.253)	-0.315* (0.177)	-0.532*** (0.225)	-0.217 (0.175)	0.036 (0.220)
Horizontal inequality	-0.108 (0.143)	-0.154 (0.174)	-0.111 (0.146)	-0.104 (0.147)	-0.051 (0.140)	-0.161 (0.125)	-0.080 (0.129)	-0.079 (0.139)
Status excluded	0.775** (0.287)	0.765** (0.283)	0.743* (0.284)	0.738* (0.298)	0.724*** (0.228)	0.797*** (0.229)	0.727*** (0.231)	0.637*** (0.237)
Previous rebellions	1.290*** (0.347)	1.383*** (0.333)	1.288*** (0.339)	1.366*** (0.335)	1.550*** (0.333)	1.511*** (0.326)	1.532*** (0.333)	1.589*** (0.325)
Status downgraded	1.401** (0.457)	1.425** (0.473)	1.439** (0.463)	1.459** (0.463)	0.999* (0.550)	0.968* (0.536)	1.008** (0.544)	1.112** (0.547)
Ln(Country GDP per capita)	-0.173 (0.137)	-0.216 (0.120)	-0.151 (0.141)	-0.190 (0.132)	-0.017 (0.095)	-0.076 (0.104)	0.018 (0.107)	-0.003 (0.098)
Ln(Country population)	0.133 (0.075)	0.091 (0.072)	0.130 (0.073)	0.110 (0.076)	0.295*** (0.075)	0.310*** (0.067)	0.318*** (0.073)	0.282*** (0.072)
Peace year	-0.324*** (0.055)	-0.324*** (0.055)	-0.322*** (0.055)	-0.326*** (0.056)	-0.661*** (0.061)	-0.663*** (0.061)	-0.660*** (0.061)	-0.664*** (0.062)
Peace year ²	0.010*** (0.002)	0.010*** (0.002)	0.010*** (0.002)	0.010*** (0.002)	0.023*** (0.003)	0.023*** (0.003)	0.023*** (0.003)	0.023*** (0.003)
Peace year ²	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)
Intercept	-4.494* (1.638)	-3.387 (1.421)	-4.738* (1.676)	-3.897* (1.587)	-6.971*** (1.685)	-6.546*** (1.597)	-7.636*** (1.757)	-6.895*** (1.569)
AIC	650.089	651.641	647.412	650.957	1291.200	1289.399	1292.600	1293.672
BIC	739.675	741.227	736.998	740.543	1381.693	1379.892	1383.093	1384.164
Log Likelihood	-312.045	-312.821	-310.706	-312.479	-632.600	-631.700	-633.300	-633.836
Deviance	624.089	625.641	621.412	624.957	1265.200	1263.399	1266.600	1267.672
Num. obs.	7268	7268	7268	7268	7793	7793	7793	7793

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Standard errors are clustered by groups. TEK = trans-border ethnic kin.

Figure 2. Average marginal effects of transnational inequality on ethnic conflict

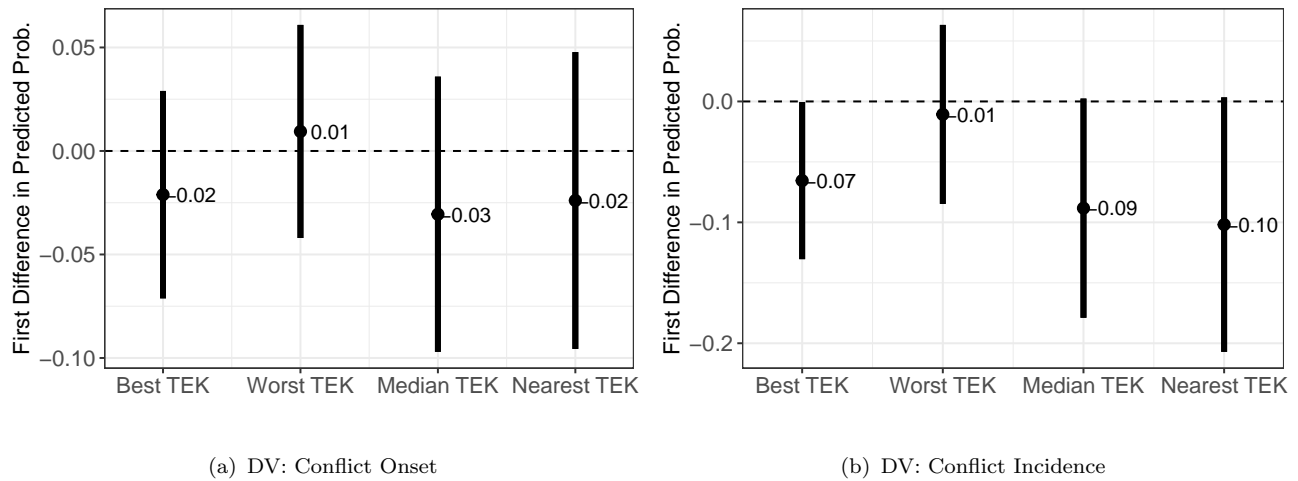


Figure 2 shows the average first difference in predicted probabilities for the onset and incidence of ethnic conflict with 95% confidence intervals. The average marginal effects are based on 1,000 simulations from the parameters' posterior distributions of models in Table 1.

Figure 2 shows the average marginal effects of transnational inequality across Table 1 on the onset and incidence of ethnic conflict. When ethnic groups are doing better compared to the nearest and median kin groups abroad, the predicted probability of experiencing ethnic conflict *decreased* by around 0.1, which is a substantive reduction in the risk of conflict propensity for ethnic groups. Taken together, the results in Table 1 and Figure 2 confirm the first two hypotheses and demonstrate two important findings.¹⁶

First, our analysis largely replicates the main findings in Han et al. (2014) that a group with a kin group abroad is less likely to be involved in conflict against its government if the group enjoys a higher level of economic performance as compared to its kin group abroad. The marginal effects indicate that, when an ethnic group enjoys 'greener grass' on its own side, feelings of deprivation and grievances can be mitigated, making the group less likely to fight an ethno-nationalist conflict. This finding is promising given that we use different sample data and

16. We also estimate a series of baseline models where we only include our transnational inequality variable. As shown in Figure A1, the marginal effects are consistent with Figure 2, suggesting that the effects of transnational inequality are not confounded by other control variables from these models.

measures from Han et al. (2014). In this sense, cross-border kin comparison does matter for the outbreak of ethnic conflict.

Second, we find evidence that changing the reference group for the TEK comparison matters. Most groups with transnational ethnic kin have multiple potential comparison groups. Which of them are the most relevant reference for comparisons? Figure 2 reveals that comparisons with a group's *nearest*, *median* and *richest* kin are highly associated with a group's likelihood of rebellion against its government. Comparisons with the *worst* group do not have much association with conflict. In other words, although a group may have several kin groups, not all of them are weighted equally when that group looks for a reference point. Geographic proximity specifically plays an important role in helping a group gather information on the economic performance of a comparable kin group. Nearby external kin groups tend to be similar on critical attributes as the group in question; relative performance in comparison with nearby kin weigh heavily on perceptions of inferiority. Additionally, when members of a group focus on the fates of 'average' (median) cross-border kin, they can more clearly imagine how the group might fare under alternative political and economic arrangements.

Turning to Hypotheses 3a and 3b, we anticipate that comparisons with the *best* and *worst* groups will have different meaning depending on whether they are upward or downward comparisons. Figure 3 summarizes the findings using the asymmetric measures given in *Equations (2) and (3)*. Consistent with Hypothesis 3b, the marginal effect for *relative wealth* when the comparison is with the *best* group is negatively and significantly associated with the propensity of armed conflict. Even the marginal effects of *relative wealth* in the conflict incidence models that involve comparisons with the *nearest* and *median* groups are negative and statistically significant, suggesting that *downward comparisons* are particularly salient in mitigating perceptions of grievance by relatively well-off groups. This finding again resonates well with the aforementioned case of IMAR in China as we illustrated in the previous section (Han, 2011), as well as some recent experimental evidence for individual inequality in the US (Condon and Wichowsky, 2020).

Figure 3. Average marginal effects of upward and downward comparisons on ethnic conflict

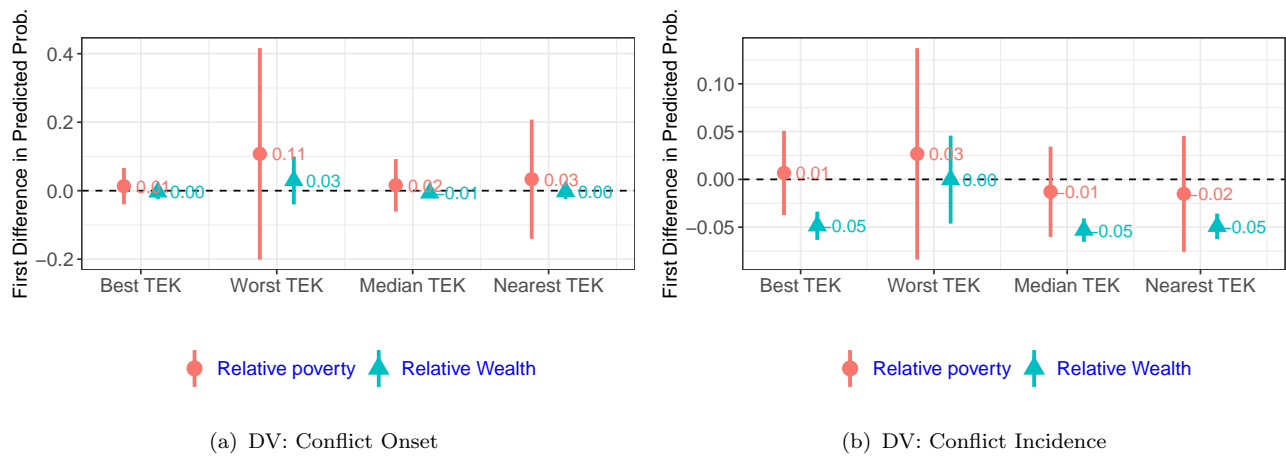


Figure 3 shows the average first difference in predicted probabilities of the onset and incidence of ethnic conflict with 95% confidence intervals. The average marginal effects are based on 1,000 simulations from the parameters' posterior distributions of these models in Table A1.

In contrast, the marginal effects for *relative poverty* are not statistically significant. We thus do not find sufficient evidence to confirm Hypothesis 3a, that upward comparisons are salient in motivating conflict. A novel finding thus emerges: relative poverty in comparison with transnational kin does not appear to exacerbate the potential for conflict, but relative wealth does appear to attenuate the potential for conflict. These contrasting effects between upward and downward comparisons thus demonstrate the necessity to differentiate reference groups when evaluating sources of grievances for ethnic groups.

It is also important to note that transnational inequality may not well explain conflict *onset*, but it does well explain conflict *incidence*. These contrasting relationships suggest that while transnational comparisons are important inputs in shaping group grievances, they are less likely to trigger conflict onset. Instead, making comparisons with kin groups abroad can change the propensity for conflict to be attenuated or prolonged. Another possible explanation is that there might be heterogeneous effects of transnational comparisons depending on the type of ethnic conflict, which we will further investigate in the subsequent section.

While our results demonstrate that comparisons with different reference groups can produce

distinctive conflict propensities, the models thus far have not pitted the comparisons against one another. To explore whether one of the comparisons has more explanatory power than the others, we use a data-driven, machine-learning approach to identify the most relevant type of comparison.¹⁷ More specifically, we use a random forest model with 500 trees to fit our data using the same covariates from our main regression models in Table 1. We construct a rank of variable importance based on the *mean decrease in node impurity* for each variable, helping us identify which measures have more explanatory power. As shown in Figure A2 in the appendix, the results reveal that the comparison to the ‘best’ group provides more apparent explanatory power for the likelihood of conflict incidence than the other measures, followed by the comparisons to the nearest and median groups. We see some indication that groups are more motivated by their comparisons to their most well-off kin than to other kin.

In a nutshell, our main results not only provide support for our hypotheses on the importance of transnational comparison, but also provide us with more nuanced views than previous research does on the menu of comparisons for choosing the reference points for groups that have several kin groups abroad.

Robustness checks

We run a number of robustness checks to demonstrate consistency in our findings across alternative model specifications and subset of samples. All results are summarized in the appendix.

First, we use two-way fixed-effects ordinary least squares (OLS, or linear-probability) models to account for unobserved characteristics at the group level, as well as common shocks from a given year. The results from two-way fixed-effects models (Tables A2–A3) are consistent with our main findings; moreover, we observe statistically significant associations in the models of conflict *onset*. We also use simple pooled OLS models (Tables A4–A5) and the results are still consistent with our main findings.

17. Because the four measures of transnational comparison are highly correlated and measures of the same underlying concept of grievance, traditional regression models with all the measures included would perform poorly and the partial effects would have a narrow interpretation.

Second, we use a multilevel mixed-effects generalized linear model to account for unobserved country-level characters and common shocks in certain years while including random effects on country and year effects. Our main results are consistent and robust across these models (Tables A6-A7). Overall, our main findings still hold when using varying modeling approaches. One difference is that the inclusion of fixed effects or multilevel mixed-effects returns statistically significant coefficients for the comparisons with the ‘worst’ TEK group.

Third, we consider the possible influence of group sizes and specific countries by dropping certain groups and countries from the sample. Following [Cederman et al. \(2011\)](#), we drop ethnic groups with an estimated population less than 500,000 from our sample, as the G-Econ data are more prone to measurement errors for tiny groups. As a result, our sample size decreases by around 2,600 group-year observations. As shown in Figures A3–A4, the results are robust to and consistent with the ones in Figures 2–3.

Fourth, we drop cases where an ethnic group only has one TEK group because this kind of group does not have a comparison choice. We thus drop 28% of the sample. This results, displayed in panel (c) of Figure A5, show that the average marginal effects for the upward and downward comparison are consistent with our findings in Figure 3, indicating robust evidence for our hypothesis 3b.¹⁸

Finally, we consider dropping Iraq from the sample to show that our results are not driven by this specific case. According to our data, Iraq accounted for 7% of the total conflict onset and 18% of total conflict incidence in our sample, which could be a potential source to drive the effect. Figure A6 shows that our results are consistent and robust with the main models after we drop the Iraq cases.

18. While the marginal effects have decreased in statistical significance in panel (a) of Figure A5, the signs and magnitudes are quite similar to the ones in Figure 2.

Heterogeneity analysis

We further explore the heterogeneous effect of transnational inequality. First, we check whether the effects of transnational inequality vary by the type of incompatibility (whether the incompatibility of ethnic conflict concerns government or territory). For ethnic territorial conflict, groups usually fight for the status of a territorial homeland, with demands for secession or autonomy, and our arguments about transnational comparisons should pertain well to these conflicts. In particular, groups that feel marginalized in their particular states might perceive secession or annexation as preferred alternatives. In contrast, a feeling of being relatively well off with regard to transnational kin will contribute to an acceptance of the existing institutional structures of cohabitation with other groups in the state and less of a desire for secession.

For ethnic governmental conflict, ethnic groups usually fight for the type of political system, the replacement of the central government, or change in the government's composition. In governmental conflicts, perceived deprivation relative to transnational kin-groups will also lead to frustrations against the government, but the most marginalized groups might be deterred from violently challenging the state in a futile effort. Moreover, groups that see that they are doing relatively well when compared to their transnational kin might actually be *more* aggrieved against the government. When groups scan the horizon and see that they have superior wealth, they should expect political power at home to follow suit. As a result, the expectation that relative deprivation when compared to transnational kin groups leads to conflict is not likely to apply as well to governmental conflicts.

We first consider whether there are heterogeneous effects for Hypotheses 1 and 2 across *territorial* and *governmental* conflicts. As summarized in Tables A8–A9 and in Figure 4, we largely replicate the findings in Table 1 that the coefficients for transnational inequalities are negative across all models for ethnic territorial conflict. However, we do not find statistically significant negative associations with governmental conflict onsets or incidences, confirming heterogeneity by incompatibility.

Figure 4. The heterogeneous effects of transnational inequality on ethnic conflict

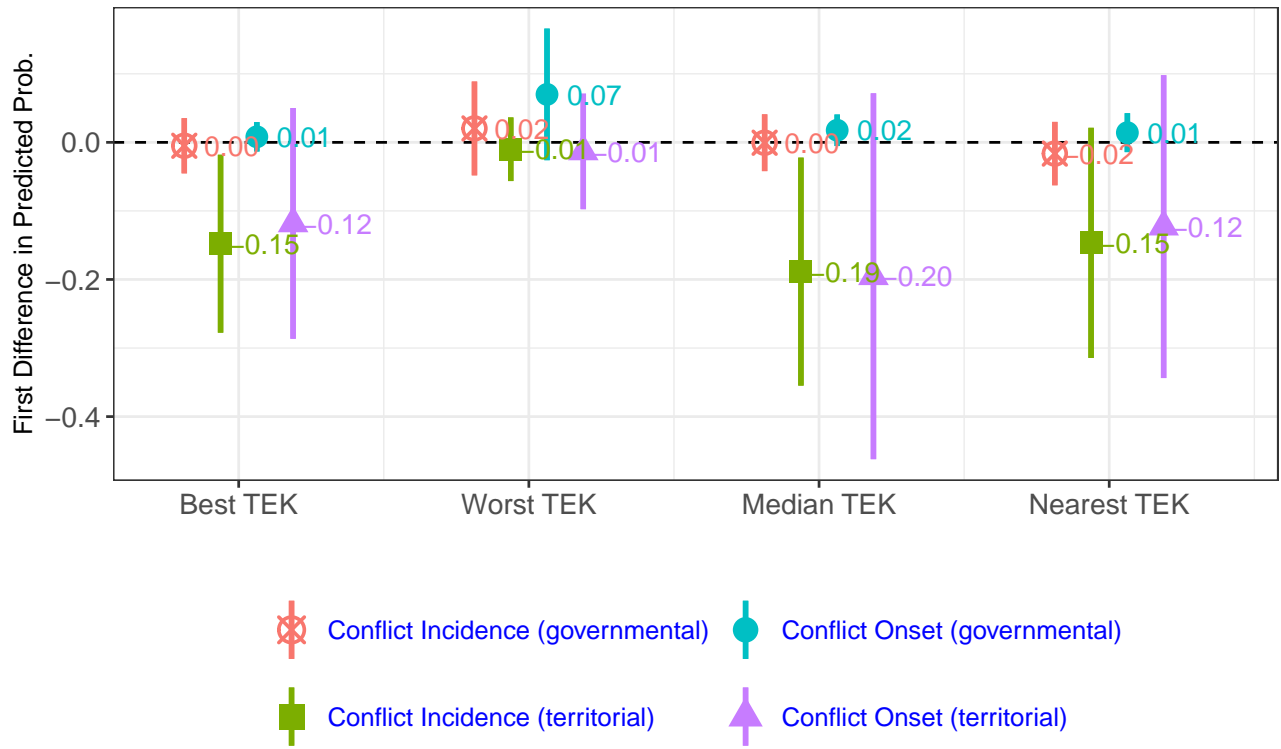


Figure 4 shows the heterogeneous effects of transnational inequality on ethnic conflict across conflict types. The average marginal effects are based on 1,000 simulations from the parameters' posterior distributions of these models in Tables A8–A9.

Furthermore, we examine heterogeneity pertaining to Hypotheses 3a and 3b. Tables A10–A11 summarize the results from logistic models using the upward and downward comparison measures. The associations between *relative wealth* and ethnic governmental conflict are consistent with the ones in Figure 3 and thus Hypothesis 3b, but the coefficients for *relative poverty* are all negative and at times statistically significant, contrary to Hypothesis 3a. In contrast, we observe support for both Hypotheses 3a and 3b when examining ethnic territorial conflicts. More specifically, upward comparison to the worst group appears especially salient in triggering ethnic territorial conflict onset, and downward comparison to the best-off kin appears to attenuate the incidence of territorial conflicts. Again, we observe heterogeneity in the findings, with the transnational inequality measures performing better when the sample includes only territorial conflicts.

Second, we consider whether the effects are conditional on the domestic political status of the ethnic groups. As Zagefka and Brown (2006:107) note, the above comparison ‘motives’ are not the only factors that might drive group perceptions of relative status. Structural variables such as domestic politics can facilitate or restrain one specific type of comparison over the other, thereby moderating the effect of group comparison on the risk of civil war. For example, Dyrstad and Hillesund (2020) point to the importance of political opportunity in shaping the willingness to support armed conflict when dissatisfied individuals find existing channels of political influence flawed or blocked. In other words, domestic politics, as well as groups’ own characteristics, may constrain the accessibility of comparison choices, making a certain type of comparison more prevailing than others in a potential conflict-risk country. Consequently, we consider specifically how the political status of an ethnic group may moderate the effect of group comparison on the risk of civil war.

Tables A12–A13 summarize the conditioning effects of transnational comparison on groups’ *political status*. Although the coefficients for transnational inequality, as well as for our asymmetric measures of transnational inequality across models in Tables A12–A13 are consistent with our main findings, coefficients for the interaction terms between transnational inequality and status excluded are not statistically significant, suggesting that we do not have sufficient evidence that the effects of transnational inequality vary by the domestic political status of an ethnic group.¹⁹

Conclusion

Existing work has found that intergroup (horizontal) inequality—comparisons between groups within the same state—serves as a foundation for much of the ethno-nationalist conflict. We argue that the existing work has largely missed another aspect of group comparison and ignores the potential influence from kin groups in other countries. In this paper, we analyze these transnational comparisons explicitly.

19. We consider additional heterogeneity by conditioning on domestic horizontal inequality (see Tables A14–A15) and natural resources (see Tables A16–A17), and by extending our sample to all groups including those without TEK (see Figure A7 and Table A18). See online appendix for detailed discussions.

Our analysis advances the scholarship on this issue in an important way. We incorporate insights from the literature on social comparison theory to understand the different potential motivations behind different cross-border kin group comparisons and develop testable hypotheses with geocoded data. Departing from the motivational aspects of social comparison, we improve upon previous work by identifying multiple sources of trans-border comparisons that come from the groups' nearest, median, best and worst kin group. For the empirical test of our arguments, we leverage a research design that allows us not only to examine the impact of a dynamic comparison rather than a static one as in Han et al. (2014), but also to explore the heterogeneity of such an impact across a range of political and social factors. Our paper thus extends existing studies on inequality and conflict by demonstrating the relevance of comparisons that are in part both vertical (within kin-group comparisons) and horizontal (inter-group comparisons).

This study focused on economic comparisons and set aside the relevance of political-power comparisons. The power status of groups domestically and the power status of their kin groups abroad are likely to additionally shape the potential for conflict (Cederman et al., 2013). This is why future work should consider the relevance of transnational political inequalities and the interactions between economic and political inequalities, as existing work has done at the domestic level. Furthermore, while this study focuses on the transnational comparison at the group-level, future work can examine how the comparison between members of ethnic kin at the individual level affects the choices of comparison and the behavior outcome of social comparison (Condon and Wichowsky, 2020). In line with this perspective, future work can design field or survey experiments to further gauge the causal effect of social comparison among members of TEK groups on their mobilization preferences. This micro-level approach will be particularly promising since most studies on social comparison are conducted in the field of social psychology, and some individual-level cross-national survey data are already paying attention to the ethnicity of respondents (e.g., Wimmer, 2017). In doing so, future work will be able to quantify the causal effects of social comparison on ethnic conflict across levels of analysis (Dyrstad and Hillesund, 2020).

Replication data

Replication data and Online Appendix for this article can be found at <https://www.prio.org/journals/jpr/replicationdata> or <https://doi.org/10.7910/DVN/LQPHOB>. All analyses were conducted using R version 4.2.1.

Acknowledgments

Earlier versions of this project were presented at research seminars hosted by Duke University, Nankai University, Shanghai Jiao Tong University, Tsinghua University and University of Macau, as well as at the 89th Annual Meeting of the Southern Political Science Association, January 4-6, 2018, New Orleans. We are especially grateful for the constructive comments that Benjamin Campbell, Xun Cao, Yi-yi Chen, Songying Fang, Peter Feaver, Margaret Foster, Yue Hu, Chengyuan Ji, Shiyao Liu, Tianguang Meng, Xun Pang, Min Tang, Xiaoyang Tang, Yingjie Wei, Xuetong Yan, Weiwen Yin, David Siegel, Xuefeng Sun, Kejin Zhao and other participants at these conferences and workshops provided. We are also grateful for the comments provided by the anonymous reviewers and the editor.

Funding

The authors disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: Chen acknowledges the support by the National Social Science Foundation of China (Grant Number: 20CGJ015).

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