Replication Paper: Humanitarian Food Aid and Civil Conflict[1]

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I used data posted by author(s): **no**

My "substantive addition" data are: **n/a**

Introduction

Since the dawn of the Bretton Woods System, food aid has been one of the most utilized interventions in humanitarian settings. According to the OECD, which tracks international aid across major international donors, humanitarian food aid refers to the "provision and distribution of food [as well as] cash and vouchers for the purchase of food" (OECD 2025b). While humanitarian aid practices have evolved from the classic model of delivering only in-kind food aid—i.e., the physical provision of food—to now include expanded forms of assistance such as cash, humanitarian organizations still center their operations on delivering food to meet the basic caloric needs of their beneficiaries. These activities are particularly relevant for preventing hunger and mass starvation in countries affected by fragility, conflict, and violence where access to food and related markets are often disrupted or do not function.

The relative importance of food assistance compared to other forms of humanitarian support is considerable. In 2023, approximately US$5.6 billion in humanitarian food aid was

[1] I utilized ChatGPT as a reference to help explain specific STATA functionalities and to proofread this replication paper. I also utilized the STATA help function for guidance on these functions and to understand syntax.

provided by major bilateral donors (OECD 2025a).[2] The use of humanitarian food aid, however, varies by donor. For instance, the United States comprised over 41 percent of global humanitarian food aid in 2023 (OECD 2025a).

While providing food for the most vulnerable seems a basic humanitarian imperative, there has been an ongoing debate among researchers regarding the potential negative impacts associated with humanitarian food aid. The heart of the concern pertains to conflict settings in which humanitarian food aid can be diverted and used by combatants. Such diversionary tactics not only contribute to negative outcomes for the intended beneficiaries but also risk prolonging conflict by supplementing the needs of combatants. Unfortunately, the risks of aid diversion remain a major concern in conflicts around the globe, and humanitarian organizations continue to be criticized for their complicity in such diversionary practices (Paravicini and Stecklow 2024).

Given the size and relative importance of humanitarian food aid within donor aid portfolios, there is a need to ensure that such aid does not worsen or exacerbate conflicts. Hence, a causal question arises: Does humanitarian food aid cause or prolong conflict? Establishing a strong causal relationship between aid and conflict incidence would violate the humanitarian principle of "Do No Harm" in which humanitarian actors are responsible for not bringing additional harm to affected communities. Such a finding would also require donors to reassess their aid policies and potentially reprioritize interventions and related funding allocations.

In this paper, I seek to replicate a study by Mary and Mishra (2014) examining this causal question. For purposes of this analysis—and in line with the approach taken by the authors—conflict is defined as "a contested incompatibility that concerns government and/or territory where the use of armed force between two parties, of which at least one is the government of a state,

[2] Based on my own calculations utilizing funding flows from OECD CRS with purpose code 72040 (emergency food assistance).

results in at least 25 battle-related deaths in a calendar year" (Mary and Mishra 2020). A further distinction is made between minor and major conflicts where a minor conflict refers to an event with between 25 and 999 battle-related deaths whereas a major conflict has over 999 deaths.

In the following sections, I examine the empirical background of this causal question and explain the data utilized by the authors as well as their methods, estimation approach, and results. I also include an additional contribution and provide concluding reflections based on my results in comparison to those presented by the authors. The annex includes my replication tables.

Empirical Background

Before examining the empirical attempts to assess the causal relationship between conflict incidence and humanitarian food aid, it is important to recognize the endogeneity issues at play. For illustrative purposes, consider a simple Ordinary Least Squares (OLS) regression where conflict incidence is the dependent variable (taking on binary values of 1 if a conflict leads to over 25 battle-related deaths and 0 otherwise):

$$Conflict_{it} = \beta Hum\_Food\_Aid_{it} + \gamma_{it}\boldsymbol{X}_{it} + \varepsilon_{it}$$

Our desire is to assess the impact of humanitarian food aid (Hum_Food_Aid) on conflict incidence, represented by the coefficient β. Country-level covariates as well as time and country-specific fixed effects ($\boldsymbol{X}_{it}$) can be included to improve estimates. Why might this simple formulation not produce reliable and unbiased results? One important reason is that the relationship between humanitarian food aid and conflict is not unidirectional. Instead, reversal causality may be a factor as worse conflicts may require higher levels of food aid, distorting the interpretation of β. Another reason is that aid from donors is not randomly assigned but is the result of specific, intentional choices made by donors, leading to selection bias. Additionally, it is highly likely that

such a simple model will be subject to omitted variable bias (OVB). For example, the political or strategic importance of a given recipient country for a donor will influence the levels of aid the recipient receives from that donor. If the donor also simultaneously provides military assistance, this political / strategic relevance becomes an important omitted variable which can bias results.

In 2014, Nunn and Qian published a seminal article assessing whether or not U.S. food aid had an effect on conflict in recipient countries (Nunn and Qian 2014). The authors examine 125 non-OECD countries from 1971-2006. Additionally, the authors acknowledge the challenge of utilizing a basic OLS to assess causality. They note that there is a risk of generating biased estimations if food aid is included directly as an independent variable. According to the authors, the occurrence of conflict itself could lead to reverse causality and increase the demand for humanitarian food aid, biasing results upwards. The authors also argue that downward bias could exist if donors choose to reduce assistance due to the presence of conflict.

To navigate the endogeneity problem, Nunn and Qian employ a two-stage least squares (2SLS) approach in which they utilize an instrumental variable measuring variation in U.S. wheat production. The justification for this instrument is that U.S. domestic wheat production is correlated with in-kind (physical) food aid—satisfying the relevance requirement—and wheat production affects conflict incidence only through endogenous food aid—satisfying the exclusion restriction requirement. Their findings suggest that a 1,000 metric ton increase in food aid increases the incidence of civil conflict by 0.25 percentage points as well as the duration of conflict—a significant and controversial finding with potentially major implications on the humanitarian community's future use of humanitarian food aid.

In 2017, Christian and Barrett published a paper assessing the methodology used by Nunn and Qian (Christian and Barrett 2017). While Cristian and Barrett recognize the careful analysis

and robustness checks used by Nunn and Qian, they argue that Nunn and Qian's findings are vulnerable to spurious, nonlinear, and non-parallel trends in their data. Their argument centers on the fact that Nunn and Qian utilize an interaction term for their instrument—namely, lagged U.S. wheat production interacted with a country's propensity to receive food aid—which, in effect, creates a continuous difference-in-differences (DiD) estimator.

Christian and Barrett focus on important changes in U.S. agricultural policy beginning in 1985 which phased out wheat price supports and government stockpiling—a change which should have affected the causal link between wheat production and food aid. If Nunn and Qian's approach were valid, their results would be strongest in the pre-1985 period and decline after the policy took effect. Christian and Barrett employ a placebo test to show that Nunn and Qian's results persist even in the post-policy period. This suggests that the estimates may be driven by spurious correlations. As an additional test, Christian and Barrett conduct a randomization inference test in which they reshuffle wheat aid volumes among recipient countries within each year. This reshuffling should have eliminated any causal finding; however, the Nunn and Qian results still show a positive relationship between aid and conflict. As a final measure, Christian and Barrett employ Monte Carlo simulations to create a universe in which food aid has no effect on conflict incidence and even reduces it. Despite these adjustments, Nunn and Qian's approach still produces positive coefficients. Christian and Barrett conclude that Nunn and Qian's instrument likely violates the exclusion restriction due to spurious nonlinear trends.

Building on these critiques, Mary and Mishra reexamine the causal relationship (Mary and Mishra 2020). Similar to Nunn and Qian, they employ a 2SLS approach; however, they utilize a different, non-interaction-type instrument while also including country-specific cubic time trends. These adjustments sought to account for Christian and Barrett's criticisms. It should be noted that

Mary and Mishra utilize a dataset which differs substantially from the one used by Nunn and Qian, analyzing only 79 countries over a 16 year period (2002-2017). That said, their findings ultimately contradict those of Nunn and Qian and conclude that "a 10 percent increase in humanitarian food aid per capita *decreases* the incidence of civil conflict by about 0.2 percentage point" (Mary and Mishra 2020). The authors use this finding to claim that food aid reduces conflict incidence and that more assistance should take the form of food aid.

Data

To replicate the analysis by Mary and Mishra, I located all original data sources used by the authors. This included sourcing data across 6 distinct datasets measuring conflict incidence, humanitarian food aid as well as other forms of aid and country-specific covariates such as gross domestic product (GDP), inflation, temperature, precipitation, ethnic tensions, and political regime type. I manually downloaded, cleaned, transformed, and merged these various datasets to replicate the original aggregate dataset. The final unit of analysis was country and year.

GDP and inflation were sourced from the World Bank's World Development Indicators (World Bank 2025b). The format of the data was in Excel, so I utilized Stata's import command to convert the file into a Stata compatible version. I utilized several indicators from this dataset, namely: GDP per capita, PPP (constant 2021 international $) [NY.GDP.PCAP.PP.KD]; Inflation, consumer prices (annual %) [FP.CPI.TOTL.ZG]; and Inflation, GDP deflator (annual %) [NY.GDP.DEFL.KD.ZG]. It should be noted that the authors use constant 2011 international dollars. I, therefore, employed a deflator available from the World Bank to approximate the authors' results (World Bank 2025c). This dataset serves as my foundation for merging across other datasets as it contains the most widely available data across countries and time.

Aid data was sourced from the Organization for Economic Development and Cooperation Credit Reporting System (OECD CRS). I was able to locate a comprehensive parquet file via the OECD CRS website (OECD 2025a). I then utilized R to import the parquet file and transform it into a Stata-compatible file. I also utilized the OECD's development finance classifications list to match country names with recipient codes as well as financial purpose codes which help distinguish funds used for specific activities (OECD 2025b). For instance, the authors focus on humanitarian food aid (coded 72,040) as well as food aid (coded 52,010). This required importing both recipient and purpose codes from Excel documents available from OECD into Stata. I then used Stata's merge function to combine datasets to form the combined aid dataset. Aid data used by Mary and Mishra are provided in constant 2017 U.S. dollar terms; however, the same figures were available to me in constant 2022 U.S. dollar terms. Therefore, to match the authors, I utilized a deflator available from the World Bank (World Bank 2025c).

The authors source average temperature and precipitation on a monthly basis by country from the University of East Anglia Climate Research Unit Database (Harris et al. 2020). Unfortunately, I could not locate an aggregated form of this dataset as the data was available for download only at the individual country level. Due to time limitations, I chose to utilize country-level yearly precipitation and average surface temperature data from the Global Data Lab (Global Data Lab 2025a; 2025b). Given that the authors use precipitation and temperature data as part of their covariate matrix, the substitution between monthly and yearly values should not constitute a major change to the authors' underlying assumptions or model. That said, I demonstrate that this substitution does not affect the authors' final results.

To measure ethnic tensions, the authors use data from the Political Risk Services International Country Risk Guide (The PRS Group 2025). Access to the ethnic tensions index

requires a paid subscription. I was able to gain access to a downloadable file via the World Bank Group's library. This index is bound from 0 to 6 and available on a monthly basis. To match the authors' results, I averaged monthly index values to get a yearly estimate. I then rescaled the average yearly index value so that the new bounds ranged from 0 to 1, in line with the authors' treatment. Lower index values signify lower levels of ethnic tensions.

For political regime, I utilized the Polity5 database from the Center for Systemic Peace (Center for Systemic Peace 2020). At the time of their writing, Mary and Mishra accessed the Polity IV database. I was able to download an Excel file with Polity2 scores by country and year. The Polity2 score estimates a country's regime authority type based on a 21-point scale. At the extreme ends of the scale, this includes hereditary monarchy (-10) and consolidated democracy (+10).

Finally, the dependent (outcome) variable came from the Uppsala Conflict Data Program (Davies et al. 2024). This variable is binary and equals 1 if conflict resulted in more than 25 battle-related deaths in a given year; the same logic applies to minor (25-999 battle-related deaths) and major conflicts (>999 battle-related deaths). It should be noted that UCDP makes available several datasets ranging from georeferenced event datasets to yearly datasets associated with armed conflict, dyadic, one-sided violence, non-state conflict, and battle-related deaths. Unfortunately, the authors do not clarify which dataset(s) they use to form their aggregate dataset. For purposes of my replication, I draw upon the UCDP Georeferenced Event Dataset (GED) Global version 24.1. The primary reason for using this dataset is that it provides the most granular level of analysis, and battle-related deaths are associated with specific geographical locations. This differs from the UCDP's other datasets which do not allow one to attribute the number of battle-related deaths to specific geographical areas.

Methods

As indicated previously, the authors utilize a 2SLS estimation as a means of overcoming endogeneity issues associated with using aid directly in a standard OLS regression. The 2SLS equation is specified as follows, with the second stage being listed first (I utilize the same notation as the authors for the sake of consistency and comparability):

$$C_{it} = \beta AID_{it} + \gamma_{it}\boldsymbol{X}_{it} + \theta_t + \varphi_{it} + \delta_i + \varepsilon_{it}$$

$$AID_{it} = \alpha S_{jt} + \mu_{it}\boldsymbol{X}_{it} + \pi_t + \omega_{it} + \rho_i + \varepsilon_{it}$$

C_{it} represents conflict being present in country i in year t. Humanitarian food aid per capita is captured by AID_{it}. $\boldsymbol{X}_{it}$ is a vector of independent variables which includes non-food foreign aid (logged), GDP per capita (logged), inflation rate (logged), climate variables (average monthly temperature and precipitation for a given year), ethnic tensions, and political regime. It should be noted that the authors also include covariates for the weighted averages for food aid and conflict in neighboring countries to account for potential cross-border spillover effects. For instance, conflict may cross borders (e.g., expanding conflict zones, movement of refugees / displaced persons, etc.) which could influence domestic conflict dynamics. The authors, therefore, employ additional neighboring countries weighted average covariates which account for these potential dynamics, particularly for conflict and food aid. I, however, do not include such weighted averages due to time constraints and given that these additional variables are not the primary variables of interest but simply serve as covariates. That said, I analyze the authors' results without these weighted averages and find that their results still hold. The equation also includes time fixed effects (θ_t , π_t) to control for shocks which could affect both conflict and aid flows; country time trends (φ_{it} , ω_{it}) as a means for dealing with spurious trends raised by Christian and Barrett; and country fixed effects (δ_i, ρ_i).

S_{jt} is the instrument and represents "the share of humanitarian food aid out of total aid averaged across all sampled countries other than country *i*" (Mary and Mishra 2020). The intuition behind this instrument is not immediately obvious, so further explanation is warranted. The authors make a few critical assumptions regarding the international aid architecture and budgetary decision-making among donors. The first is that donor food aid budgets are assumed to be constrained, at least in the short term. Increasing aid to one country, therefore, is assumed to come at the expense of aid available for others. Second, the authors assume that donors respond to "loud emergencies" which are high profile crises that garner significant media and political attention. Such loud events motivate potential reallocations of humanitarian food aid. As Mary and Mishra note, "The validity of the strategy relies on donors' responses to loud emergencies and food aid budget constraints" (Mary and Mishra 2020). I examine the validity of these assumptions later.

To further illustrate the logic of the instrument, consider two hypothetical countries. If a "loud" crisis occurs in Country B, donors may shift humanitarian aid toward Country B, thereby reducing aid for Country A. This creates "between-country displacement" in aid flows. The change in Country A's available aid, therefore, is being driven by an exogenous, random shock in Country B (or elsewhere). Meeting the relevance criterion can be verified by assessing the level of the first stage F-statistic. Additionally, the exclusion restriction is met by assuming that the average food aid to other countries should not directly affect conflict in a given country except through the amount of food aid that the country receives. In other words, if food aid for Country A shifts to Country B in response to a loud crisis, we would not expect conflict to worsen in Country A unless the reduction in food aid bears a direct influence on conflict dynamics. For example, less aid in Country A could lead to reduced food availability and greater social tension as well as increasing hostilities.

Estimation and Results

To ensure that my replication is in line with the authors' assumptions and results, I begin by analyzing the authors' aggregate dataset (individual original source datasets were not provided by the authors). As shown in Tables 1a and 1b in the Annex, I successfully replicate the authors' results, noting minor differences across the conflict-related variables. My OLS as well as my 2SLS regressions (first and second stage) closely align with the authors' results. The impact of aid on conflict incidence—our variable of interest—aligns with the paper's findings and is significant at the 5 percent level.

I then repeat these regressions by sequentially removing weighted averages of neighboring countries for aid and conflict (Table 2) as well as replacing monthly precipitation and temperature with annualized values (Table 3). The purpose of these iterations is to demonstrate that the authors' results still hold. While there are minor differences in the levels of statistical significance across select covariates, humanitarian food aid—our variable of interest—remains negative and significant at the 5 percent level. Additionally, the F-statistic—which helps determine if the instrument may be weak—remains above the generally accepted level of 10. These initial results, therefore, help confirm that my approach and related STATA coding—including incorporating changes such as removing neighboring country weighted averages and replacing monthly precipitation and temperature with annualized values—are in line with the authors' findings.

I then attempt to reconstruct the authors' aggregate dataset using the original data sources. I noticed important differences between my final dataset and the one compiled by the authors. In particular, the authors include Venezuela and Yemen in their regressions while I am unable to do so given that these countries have missing values for inflation. It seems this data may have been available to the authors when they were drafting their paper, however, I was unable to determine

why such data is no longer available. This is likely due to the data source (World Bank) revising past data as better estimates became available or withdrawing what may have been unreliable estimates. Therefore, my replication using original data sources (Tables 4a and 4b) includes 77 countries compared to the 79 used by the authors. Additionally, there are noticeable differences between the authors' conflict and food aid data (as shown in the comparison of descriptive statistics shown in Table 4a). While I was unable to determine the cause of these differences, these datasets could also be subject to similar back-dated revisions from the underlying data sources. That said, other covariates such as GDP, inflation, polity score, and ethnic tensions are closely aligned to the authors' original results. As shown, my replicated regression results demonstrate that the food aid coefficient switches from negative to positive and loses statistical significance. Additionally, the first-stage F-statistic falls below 10, indicating that the instrument may be weak.

As an additional contribution, I extend my analysis to include 7 additional countries beyond what the authors included and for which data is available (Belarus, Dominican Republic, Gabon, Guyana, Serbia, Somalia, and Syrian Arab Republic); my extension also includes an additional year of analysis (2018). As shown in Table 5, the authors' results do not hold, and the coefficient for food aid remains positive and without statistical significance. The first-stage F-statistic also indicates that the instrument is weak. It could be the case that the missing weighted averages for conflict and aid in neighboring countries as well as the lack of monthly precipitation and temperature data could be influencing my results; however, our prior analysis using the authors' original aggregate dataset demonstrates that these covariates should have a non-material impact on the overall results. Covariates such as ethnic tensions, GDP per capita, and other food aid remain statistically significant in line with the authors' original results.

Finally, I attempt to replicate the authors' additional regressions using minor and major conflicts as the dependent variable, respectively. While the minor results are similar to my other findings—in which the aid coefficient is positive and not significant—my results associated with major conflict reveal a contradictory finding. In particular, the coefficient for food aid is positive and statistically significant at the 10 percent level. My findings suggest that a 10 percent increase in humanitarian food aid per capita *increases* the incidence of major conflict by 0.06 percentage point. That said, the first-stage F-statistic remains below 10, implying that the instrument is weak.

Conclusion

In summary, I was able to successfully replicate the authors' results when using their original aggregated dataset; however, when using the original source datasets, I am unable to replicate the authors' results. Instead, my results indicate that humanitarian food aid may increase the incidence of conflict, particularly for major conflicts—a concerning finding in line with Nunn and Qian. That said, I find the instrument is weak in all scenarios. In short, I am unable to verify that the authors' results hold, including when accounting for additional observations for conflict-affected countries such as Somalia and Syrian Arab Republic and an extra year of data. Unfortunately, these findings question the conclusions made by the authors and do not provide clarity as to whether or not food aid increases the incidence of conflict.

In addition to these results, there are several issues which undermine the authors' findings. First, several countries which have experienced major conflict and have been recipients of humanitarian food aid during the period of analysis are missing. Based on my calculations—and utilizing estimates of food aid needs from the Global Network Against Food Crises—108 million people across 43 countries, on average, were estimated to be in food and nutrition security crises

from 2016-2017 (Global Network Against Food Crises 2024). Drawing upon the OECD financial flows data, approximately US$3.6 billion in humanitarian food aid per year was mobilized by bilateral donors to these countries (2002-2017) (OECD 2025a). Of these, almost 86 million people (79%) were in 28 countries which appeared at least once on the World Bank's annual List of Fragile and Conflict-affected Situations (FCS) from 2005-2017 (World Bank 2024). These FCS countries received, on average, almost US$2.3 billion (64%) of the total humanitarian food aid (2002-2017).

The authors' analysis covers only 18 of the 28 FCS countries, representing approximately 52% (56 million) of the total number of people in crisis and living in countries affected by fragility and conflict. These FCS countries received only 30% (US$1.1 billion) of the total average annual humanitarian food aid from 2002-2017. Notably missing countries include Afghanistan, Burundi, Central African Republic, Chad, Djibouti, Mauritania, Nepal, Somalia, South Sudan, and Syrian Arab Republic. Collectively, these missing countries represent 31% of the total average annual humanitarian food aid spend—a significant missing gap in the authors' analysis. My extended analysis incorporates some of these missing countries, particularly Somalia and Syrian Arab Republic. Furthermore, from 2005-2017, there are 12 countries which appeared every year on the World Bank's FCS List. Of these, 5 are not included in the authors' analysis. These countries alone comprise almost 12% (US$440 million) of the total average annual humanitarian food aid spend.

Additionally, the core assumptions made by the authors to support the validity of the instrument are overly simplistic and do not hold in practice. For example, depending on the donor, aid budgets may not be strictly constrained. Some donors, for instance, possess flexible financial mechanisms which allow them to scale up allocations without reducing funding elsewhere in their portfolios, violating the between-country displacement assumption the authors require for the instrument to be relevant. Examples include the World Bank Crisis Response Window (CRW), the

United Nations Central Emergency Response Fund (CERF), and OCHA-managed Country-based Pooled Funds (CBPFs) (World Bank 2025a; United Nations 2025; OCHA 2025). Some donors may pursue supplementary budgetary procedures such as congressional or parliamentary approvals or respond to United Nations special appeals to mobilize additional financing. The willingness to reallocate aid may also depend on the timing of a crisis during the fiscal year. For example, if a crisis emerges late in the year and other country programs are underperforming, donors may be more likely to reprogram existing resources.

Furthermore, donor funding decisions are not always proportional to the underlying humanitarian need. Aid flows, for instance, may be influenced more by foreign policy priorities such as economic interests, military alliances, and other strategic priorities. These decisions can also vary depending on the political administration in power (Landay, Pamuk, and Pamuk 2025). Tracking aid financing let alone understanding the many nuances underlying a donor's financial decision-making is a notoriously difficult undertaking. These issues, however, are not taken up by Mary and Mishra which raises concerns about the validity of their assumptions.

Finally, the claims made by the authors extend well beyond what the authors empirically analyzed. For instance, the authors claim that their results support the views that: "humanitarian food aid saves lives"; aid is "an effective tool in promoting security"; and that "foreign sector aid [should be reallocated] towards humanitarian food aid…to achieve SDG#2 and SDG#16" (Mary and Mishra 2020). None of these claims are the primary focus of their empirical analysis. The authors risk misrepresenting their results, and their conclusions could mislead policy makers seeking to make well-informed decisions regarding their future use of food aid in conflict settings. Unfortunately, based on my replication results, the causal relationship between food aid and conflict remains inconclusive, and additional empirical analysis is warranted.

Annex: Tables

Table 1a. Replication of descriptive statistics using authors' dataset

Descriptive statistics	Author (n = 1158)				My replication using authors' dataset (n = 1158)				% Diff.
	Mean	Std. dev.	Min.	Max.	Mean	Std. dev.	Min.	Max.	Mean
Variables	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)
Civil conflict – more than 25 battle-related deaths	0.194	0.396	0	1	0.194	0.396	0	1	0.0%
Civil conflict – more than 25 battle-related deaths but less than 1000	0.180	0.385	0	1	0.180	0.385	0	1	0.0%
Civil conflict – more than 999 battle-related deaths	0.0259	0.159	0	1	0.0260	0.159	0	1	0.4%
Onset of civil conflict – more than 25 battle-related deaths	0.0501	0.218	0	1	0.0500	0.218	0	1	-0.2%
Offset of civil conflict – more than 25 battle-related deaths	0.0415	0.199	0	1	0.0410	0.199	0	1	-1.2%
Number of battle-related deaths due to conflicts	120.20	577.20	0.00	10,165	120.27	577.16	0.10	10,165	0.1%
Number of battle-related deaths due to conflicts, log	-0.778	3.140	-2.303	9.227	-0.778	3.140	-2.303	9.227	0.0%
Number of civilian deaths due to government attacks	15.06	118.50	0.00	2,595	15.16	118.51	0.10	2,595	0.7%
Number of civilian deaths due to government attacks, log	-1.797	1.819	-2.303	7.861	-1.797	1.819	-2.303	7.861	0.0%
Weighted average of conflict incidence (more than 25 battle-related deaths) in neighboring countries	0.199	0.259	0	1	0.199	0.259	0	1	0.0%
Weighted average of conflict incidence (between 25 and 999 battle-related deaths) in neighboring countries	0.176	0.251	0	1	0.176	0.251	0	1	0.0%
Weighted average of conflict incidence (more than 999 battle-related deaths) in neighboring countries	0.0318	0.116	0	1	0.0320	0.116	0	1	0.6%
Weighted average of number of battle-related deaths in neighboring countries	313.9	2,649	0	57,160	313.9	2,649	0	57,160	0.0%
Weighted average of number of civilian fatalities in neighboring countries	19.51	104.6	0	2,553	19.51	104.6	0	2,553	0.0%
Humanitarian food aid per capita, constant 2017 USD	0.986	3.117	0	49.37	0.986	3.117	0	49.37	0.0%
Other non-food aid per capita, constant 2017 USD	49.58	55.26	0.92	455.90	49.58	55.26	0.92	455.88	0.0%
Other non-food aid per capita, log	3.330	1.198	-0.0825	6.122	3.330	1.198	-0.0830	6.122	0.0%
Food aid per capita, constant 2017 USD	0.833	1.645	0	27.35	0.833	1.645	0	27.35	0.0%
Weighted average of per capita humanitarian food aid in neighboring countries	1.166	3.004	0	43.92	1.166	3.004	0	43.92	0.0%
Share of humanitarian food aid out of total aid, rest of sample	2.262	0.340	1.520	2.938	2.262	0.340	1.520	2.938	0.0%
GDP per capita, PPP (constant 2011 international $)	7,425	5,856	545.3	29,494	7,425	5,856	545.3	29,494	0.0%
GDP per capita, log	8.540	0.936	6.301	10.29	8.540	0.936	6.301	10.29	0.0%
Inflation, GDP deflator (annual %)	9.317	11.22	0.0195	197.0	9.317	11.23	0.0200	197.0	0.0%
Inflation, log	1.792	1.013	-3.937	5.283	1.792	1.013	-3.937	5.283	0.0%
Polity 2 score	3.606	5.289	-9	10	3.606	5.289	-9	10	0.0%
Ethnic tensions	0.379	0.207	0	1	0.379	0.207	0	1	0.0%
Monthly average precipitation									
January	77.55	87.21	0	462.3	77.55	87.21	0	462.3	0.0%
February	70.96	78.60	0	400	70.96	78.60	0	400	0.0%
March	79.19	78.07	0	443.1	79.19	78.07	0	443.1	0.0%
April	86.86	79.18	0	419.9	86.86	79.18	0	419.9	0.0%
May	109.9	105.8	0	619	109.9	105.8	0	619	0.0%
June	119.2	121.8	0.100	639.7	119.2	121.8	0.100	639.7	0.0%
July	129.5	134.5	0	849.7	129.5	134.5	0	849.7	0.0%
August	135.9	141.5	0.00	944.6	135.9	141.5	0.00	944.6	0.0%
September	128.0	126.6	0.00	880.4	128.0	126.6	0.00	880.4	0.0%
October	119.5	118.6	0.10	1070.0	119.5	118.7	0.10	1070.3	0.0%
November	92.53	94.5	0.00	528.8	92.53	94.5	0.00	528.8	0.0%
December	85.15	90.1	0.00	445.6	85.15	90.1	0.00	445.6	0.0%
Monthly average temperature									
January	18.74	10.48	-25.70	28.70	18.74	10.48	-25.70	28.70	0.0%
February	19.83	10.02	-24.30	30.60	19.83	10.02	-24.30	30.60	0.0%
March	21.56	8.303	-11.50	33	21.56	8.303	-11.50	33	0.0%
April	23.01	6.466	-1.600	33.60	23.01	6.466	-1.600	33.60	0.0%
May	23.77	5.528	5.100	34.50	23.77	5.528	5.100	34.50	0.0%
June	24.04	5.302	3.100	34.70	24.04	5.302	3.100	34.70	0.0%
July	24.11	5.139	3.600	35.30	24.11	5.139	3.600	35.30	0.0%
August	24.25	4.605	3.600	35	24.25	4.605	3.600	35	0.0%
September	23.84	4.505	6	31.70	23.84	4.505	6	31.70	0.0%
October	22.90	5.868	-0.900	30.60	22.90	5.868	-0.900	30.60	0.0%
November	21.01	7.865	-12.70	29.30	21.01	7.865	-12.70	29.30	0.0%
December	19.25	9.739	-21.10	28.60	19.25	9.739	-21.10	28.60	0.0%

Table 1b. Replication of OLS-FE and 2SLS-IV using authors' dataset

The effect of humanitarian food aid on civil conflict incidence.

	Author			My replication using authors' dataset			% Diff.		
	OLS-FE	2SLS-IV		OLS-FE	2SLS-IV		OLS-FE	2SLS-IV	
Dependent variable	Conflict	First stage HFA	Second stage Conflict	Conflict	First stage HFA	Second stage Conflict	Conflict	First stage HFA	Second stage Conflict
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Humanitarian food aid per capita (HFA)	-0.008 ***	-	-0.018 **	-0.008 **	-	-0.018 **	5.8%	-	-0.6%
	(0.003)		[0.026]	(0.004)		(0.008)			
Other non-food aid per capita, log	-0.011	0.634 **	-0.010	-0.011	0.634 **	-0.010	-3.6%	0.0%	-2.2%
	(0.023)	(0.281)	(0.023)	(0.027)	(0.281)	(0.023)			
Food aid per capita	-0.016 #	-0.099	-0.017 #	-0.016	-0.0993	-0.0175 #	1.9%	0.3%	2.9%
	(0.011)	(0.169)	(0.011)	(0.013)	(0.169)	(0.011)			
Ethnic tensions	-0.662 **	0.031	-0.664 ***	-0.662 *	0.031	-0.664 **	0.0%	-0.6%	0.0%
	(0.290)	(1.161)	(0.293)	(0.336)	(1.161)	(0.293)			
Polity 2 score	0.013 #	0.023	0.014 *	0.013	0.023	0.014 #	1.5%	-1.3%	-2.1%
	(0.008)	(0.043)	(0.008)	(0.009)	(0.043)	(0.008)			
GDP per capita, log	-0.616 **	-2.054 #	-0.701 ***	-0.616 *	-2.054 #	-0.701 ***	0.0%	0.0%	0.0%
	(0.276)	(1.284)	(0.268)	(0.319)	(1.284)	(0.268)			
Inflation, log	-0.014	0.032	-0.014	-0.014	0.032	-0.014	-0.7%	0.3%	-2.1%
	(0.011)	(0.076)	(0.011)	(0.013)	(0.076)	(0.011)			
HFA in neighbor countries, weighted average	-0.003	0.124	0.001	-0.003	0.124	0.001	-1.0%	0.0%	-44.1%
	(0.008)	(0.096)	(0.009)	(0.009)	(0.096)	(0.009)			
Conflict in neighbor countries, weighted average	-0.103 *	0.223	-0.100 *	-0.103 #	0.223	-0.100 *	0.0%	0.0%	0.0%
	(0.059)	(0.289)	(0.060)		(0.289)	(0.060)			
Displacement (instrument)	-	-71.029 ***	-	-	-71.030 ***	-	-	0.0%	-
		(20.359)			(20.370)				
Observations	1,158	1,158	1,158	1,158	1,158	1,158	0.0%	0.0%	0.0%
Number of countries	79	79	79	79	79	79	0.0%	0.0%	0.0%
Country FE	YES	YES	YES	YES	YES	YES	-	-	-
Year FE	YES	YES	YES	YES	YES	YES	-	-	-
Country-specific time trends	CUBIC	CUBIC	CUBIC	CUBIC	CUBIC	CUBIC	-	-	-
Weather controls	YES	YES	YES	YES	YES	YES	-	-	-
First-stage, F-stat	n.a.	n.a.	12.17	n.a.	n.a.	11.08	-	-	-9.0%

Notes: Robust country-clustered standard errors in parentheses ***p < 0.01, **p<0.05, *p <0.10, #p<0.15. Stock-Wright LM p-values in square brackets. n.a.: not applicable.

Table 2. Replication of OLS-FE and 2SLS-IV using authors' dataset (simplified version 1) [*removing weighted averages of neighboring countries for humanitarian food assistance and conflict*]

The effect of humanitarian food aid on civil conflict incidence.

	Author			My replication using authors' dataset			% Diff.		
	OLS-FE	2SLS-IV		OLS-FE	2SLS-IV		OLS-FE	2SLS-IV	
Dependent variable	Conflict	First stage HFA	Second stage Conflict	Conflict	First stage HFA	Second stage Conflict	Conflict	First stage HFA	Second stage Conflict
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Humanitarian food aid per capita (HFA)	-0.008 ***	-	-0.018 **	-0.009 **	-	-0.018 **	9.4%	-	-1.1%
	(0.003)		[0.026]	(0.003)		(0.007)			
Other non-food aid per capita, log	-0.011	0.634 **	-0.010	-0.011	0.655 **	-0.009	-3.6%	3.3%	-5.5%
	(0.023)	(0.281)	(0.023)	(0.027)	(0.283)	(0.023)			
Food aid per capita	-0.016 #	-0.099	-0.017 #	-0.018	-0.0839	-0.0183 *	9.4%	-15.3%	7.6%
	(0.011)	(0.169)	(0.011)	(0.013)	(0.174)	(0.011)			
Ethnic tensions	-0.662 **	0.031	-0.664 ***	-0.697 **	0.001	-0.702 **	5.3%	-95.8%	5.7%
	(0.290)	(1.161)	(0.293)	(0.337)	(1.200)	(0.293)			
Polity 2 score	0.013 #	0.023	0.014 *	0.013	0.020	0.014 #	1.5%	-12.6%	-2.9%
	(0.008)	(0.043)	(0.008)	(0.010)	(0.044)	(0.009)			
GDP per capita, log	-0.616 **	-2.054 #	-0.701 ***	-0.629 *	-1.915	-0.709 ***	2.1%	-6.8%	1.1%
	(0.276)	(1.284)	(0.268)	(0.327)	(1.362)	(0.273)			
Inflation, log	-0.014	0.032	-0.014	-0.015	0.038	-0.015	6.4%	18.4%	4.3%
	(0.011)	(0.076)	(0.011)	(0.013)	(0.077)	(0.011)			
HFA in neighbor countries, weighted average	-0.003	0.124	0.001	-	-	-	-	-	-
	(0.008)	(0.096)	(0.009)						
Conflict in neighbor countries, weighted average	-0.103 *	0.223	-0.100 *	-	-	-	-	-	-
	(0.059)	(0.289)	(0.060)						
Displacement (instrument)	-	-71.029 ***	-	-	-72.220 ***	-	-	1.7%	-
		(20.359)			(21.040)				
Observations	1,158	1,158	1,158	1,158	1,158	1,158	0.0%	0.0%	0.0%
Number of countries	79	79	79	79	79	79	0.0%	0.0%	0.0%
Country FE	YES	YES	YES	YES	YES	YES	-	-	-
Year FE	YES	YES	YES	YES	YES	YES	-	-	-
Country-specific time trends	CUBIC	CUBIC	CUBIC	CUBIC	CUBIC	CUBIC	-	-	-
Weather controls	YES	YES	YES	YES	YES	YES	-	-	-
First-stage, F-stat	n.a.	n.a.	12.17	n.a.	n.a.	11.08	-	-	-9.0%

Notes: Robust country-clustered standard errors in parentheses ***p < 0.01, **p<0.05, *p <0.10, #p<0.15. Stock-Wright LM p-values in square brackets. n.a.: not applicable.

Table 3. Replication of OLS-FE and 2SLS-IV using authors' dataset (simplified version 2) [*removing weighted averages of neighboring countries for humanitarian food assistance and conflict and replacing monthly precipitation and temperature with annualized values*]

The effect of humanitarian food aid on civil conflict incidence.

	Author			My replication using authors' dataset			% Diff.		
	OLS-FE	2SLS-IV		OLS-FE	2SLS-IV		OLS-FE	2SLS-IV	
Dependent variable	Conflict	First stage HFA	Second stage Conflict	Conflict	First stage HFA	Second stage Conflict	Conflict	First stage HFA	Second stage Conflict
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Humanitarian food aid per capita (HFA)	-0.008 ***	-	-0.018 **	-0.008 **	-	-0.017 **	-1.7%	-	-8.3%
	(0.003)		[0.026]	(0.003)		(0.007)			
Other non-food aid per capita, log	-0.011	0.634 **	-0.010	-0.013	0.694 **	-0.011	13.6%	9.5%	10.0%
	(0.023)	(0.281)	(0.023)	(0.027)	(0.307)	(0.024)			
Food aid per capita	-0.016 #	-0.099	-0.017 #	-0.018	-0.0818	-0.0185 #	11.3%	-17.4%	8.8%
	(0.011)	(0.169)	(0.011)	(0.014)	(0.173)	(0.012)			
Ethnic tensions	-0.662 **	0.031	-0.664 ***	-0.661 *	-0.183	-0.667 **	-0.2%	-690.3%	0.5%
	(0.290)	(1.161)	(0.293)	(0.347)	(1.264)	(0.307)			
Polity 2 score	0.013 #	0.023	0.014 *	0.014	0.020	0.015 #	10.0%	-12.6%	4.3%
	(0.008)	(0.043)	(0.008)	(0.011)	(0.041)	(0.010)			
GDP per capita, log	-0.616 **	-2.054 #	-0.701 ***	-0.592 *	-1.815	-0.671 **	-3.9%	-11.6%	-4.3%
	(0.276)	(1.284)	(0.268)	(0.334)	(1.420)	(0.286)			
Inflation, log	-0.014	0.032	-0.014	-0.015	0.019	-0.015	8.6%	-41.3%	7.9%
	(0.011)	(0.076)	(0.011)	(0.013)	(0.069)	(0.011)			
HFA in neighbor countries, weighted average	-0.003	0.124	0.001	-	-	-	-	-	-
	(0.008)	(0.096)	(0.009)						
Conflict in neighbor countries, weighted average	-0.103 *	0.223	-0.100 *	-	-	-	-	-	-
	(0.059)	(0.289)	(0.060)						
Displacement (instrument)	-	-71.029 ***	-	-	-72.410 ***	-	-	1.9%	-
		(20.359)			(21.570)				
Observations	1,158	1,158	1,158	1,158	1,158	1,158	0.0%	0.0%	0.0%
Number of countries	79	79	79	79	79	79	0.0%	0.0%	0.0%
Country FE	YES	YES	YES	YES	YES	YES	-	-	-
Year FE	YES	YES	YES	YES	YES	YES	-	-	-
Country-specific time trends	CUBIC	CUBIC	CUBIC	CUBIC	CUBIC	CUBIC	-	-	-
Weather controls	YES	YES	YES	YES (annual)	YES (annual)	YES (annual)	-	-	-
First-stage, F-stat	n.a.	n.a.	12.17	n.a.	n.a.	11.08	-	-	-9.0%

Notes: Robust country-clustered standard errors in parentheses ***p < 0.01, **p<0.05, *p <0.10, #p<0.15. Stock-Wright LM p-values in square brackets. n.a.: not applicable.

Table 4a. Replication of descriptive statistics using original source data

Descriptive statistics	Author (n = 1158)				My Replication using original source data (n = 1143)				% Diff.
	Mean	Std. dev.	Min.	Max.	Mean	Std. dev.	Min.	Max.	Mean
Variables	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)
Civil conflict – more than 25 battle-related deaths	0.194	0.396	0	1	0.213	0.410	0	1	9.8%
Civil conflict – more than 25 battle-related deaths but less than 1000	0.180	0.385	0	1	0.213	0.410	0	1	18.3%
Civil conflict – more than 999 battle-related deaths	0.0259	0.159	0	1	0.0100	0.098	0	1	-61.4%
Onset of civil conflict – more than 25 battle-related deaths	0.0501	0.218	0	1	-	-	-	-	-
Offset of civil conflict – more than 25 battle-related deaths	0.0415	0.199	0	1	-	-	-	-	-
Number of battle-related deaths due to conflicts	120.20	577.20	0.00	10,165	45.82	163.35	0.00	1,715	-61.9%
Number of battle-related deaths due to conflicts, log	-0.778	3.140	-2.303	9.227	1.482	1.965	0.000	7.448	-290.5%
Number of civilian deaths due to government attacks	15.06	118.50	0.00	2,595	18.08	85.53	0.00	1,715	20.1%
Number of civilian deaths due to government attacks, log	-1.797	1.819	-2.303	7.861	0.971	1.568	0.000	7.448	-154.0%
Weighted average of conflict incidence (more than 25 battle-related deaths) in neighboring countries	0.199	0.259	0	1	-	-	-	-	-
Weighted average of conflict incidence (between 25 and 999 battle-related deaths) in neighboring countries	0.176	0.251	0	1	-	-	-	-	-
Weighted average of conflict incidence (more than 999 battle-related deaths) in neighboring countries	0.0318	0.116	0	1	-	-	-	-	-
Weighted average of number of battle-related deaths in neighboring countries	313.9	2,649	0	57,160	-	-	-	-	-
Weighted average of number of civilian fatalities in neighboring countries	19.51	104.6	0	2,553	-	-	-	-	-
Humanitarian food aid per capita, constant 2017 USD	0.986	3.117	0	49.37	0.912	2.870	0	48.92	-7.5%
Other non-food aid per capita, constant 2017 USD	49.58	55.26	0.92	455.90	44.79	50.30	0.00	393.40	-9.7%
Other non-food aid per capita, log	3.330	1.198	-0.0825	6.122	3.294	1.117	0.0000	5.977	-1.1%
Food aid per capita, constant 2017 USD	0.833	1.645	0	27.35	0.779	1.569	0	26.38	-6.5%
Weighted average of per capita humanitarian food aid in neighboring countries	1.166	3.004	0	43.92	-	-	-	-	-
Share of humanitarian food aid out of total aid, rest of sample	2.262	0.340	1.520	2.938	1.107	0.279	0.377	1.579	-51.1%
GDP per capita, PPP (constant 2011 international $)	7,425	5,856	545.3	29,494	7,208	5,422	611.2	24,560	-2.9%
GDP per capita, log	8.540	0.936	6.301	10.29	8.548	0.882	6.415	10.11	0.1%
Inflation, GDP deflator (annual %)	9.317	11.22	0.0195	197.0	9.431	12.66	0.0630	199.3	1.2%
Inflation, log	1.792	1.013	-3.937	5.283	1.790	1.005	-2.769	5.295	-0.1%
Polity 2 score	3.606	5.289	-9	10	3.612	5.322	-9	10	0.2%
Ethnic tensions	0.379	0.207	0	1	0.382	0.209	0	1	0.8%
Yearly average precipitation	-	-	-	-	43.327	29.592	1	165	-
Monthly average precipitation									
January	77.55	87.21	0	462.3	-	-	-	-	-
February	70.96	78.60	0	400	-	-	-	-	-
March	79.19	78.07	0	443.1	-	-	-	-	-
April	86.86	79.18	0	419.9	-	-	-	-	-
May	109.9	105.8	0	619	-	-	-	-	-
June	119.2	121.8	0.100	639.7	-	-	-	-	-
July	129.5	134.5	0	849.7	-	-	-	-	-
August	135.9	141.5	0.00	944.6	-	-	-	-	-
September	128.0	126.6	0.00	880.4	-	-	-	-	-
October	119.5	118.6	0.10	1070.0	-	-	-	-	-
November	92.53	94.5	0.00	528.8	-	-	-	-	-
December	85.15	90.1	0.00	445.6	-	-	-	-	-
Yearly average temperature	-	-	-	-	21.53	5.89	-1	29.4	-
Monthly average temperature									
January	18.74	10.48	-25.70	28.70	-	-	-	-	-
February	19.83	10.02	-24.30	30.60	-	-	-	-	-
March	21.56	8.303	-11.50	33	-	-	-	-	-
April	23.01	6.466	-1.600	33.60	-	-	-	-	-
May	23.77	5.528	5.100	34.50	-	-	-	-	-
June	24.04	5.302	3.100	34.70	-	-	-	-	-
July	24.11	5.139	3.600	35.30	-	-	-	-	-
August	24.25	4.605	3.600	35	-	-	-	-	-
September	23.84	4.505	6	31.70	-	-	-	-	-
October	22.90	5.868	-0.900	30.60	-	-	-	-	-
November	21.01	7.865	-12.70	29.30	-	-	-	-	-
December	19.25	9.739	-21.10	28.60	-	-	-	-	-

Table 4b. Replication of OLS-FE and 2SLS-IV using original source data

The effect of humanitarian food aid on civil conflict incidence.

	Author			My replication using original source data			% Diff.		
	OLS-FE	2SLS-IV		OLS-FE	2SLS-IV		OLS-FE	2SLS-IV	
Dependent variable	Conflict	First stage HFA	Second stage Conflict	Conflict	First stage HFA	Second stage Conflict	Conflict	First stage HFA	Second stage Conflict
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Humanitarian food aid per capita (HFA)	-0.008 ***	-	-0.018 **	0.004	-	0.012	-151.9%	-	-167.2%
	(0.003)		[0.026]	(0.004)		(0.009)			
Other non-food aid per capita, log	-0.011	0.634 **	-0.010	-0.016	0.968 **	-0.018	46.4%	52.7%	79.0%
	(0.023)	(0.281)	(0.023)	(0.028)	(0.428)	(0.025)			
Food aid per capita	-0.016 #	-0.099	-0.017 #	-0.016	-0.116	-0.0155	2.5%	17.2%	-8.8%
	(0.011)	(0.169)	(0.011)	(0.015)	(0.191)	(0.014)			
Ethnic tensions	-0.662 **	0.031	-0.664 ***	-0.955 ***	0.088	-0.952 ***	44.3%	184.8%	43.4%
	(0.290)	(1.161)	(0.293)	(0.307)	(1.407)	(0.269)			
Polity 2 score	0.013 #	0.023	0.014 *	-0.002	0.025	-0.002	-116.5%	10.4%	-117.2%
	(0.008)	(0.043)	(0.008)	(0.011)	(0.042)	(0.009)			
GDP per capita, log	-0.616 **	-2.054 #	-0.701 ***	-0.526 *	-5.919 *	-0.446 *	-14.6%	188.2%	-36.4%
	(0.276)	(1.284)	(0.268)	(0.302)	(3.073)	(0.263)			
Inflation, log	-0.014	0.032	-0.014	-0.001	-0.001	-0.001	-93.7%	-103.7%	-91.1%
	(0.011)	(0.076)	(0.011)	(0.016)	(0.038)	(0.014)			
HFA in neighbor countries, weighted average	-0.003	0.124	0.001	-	-	-	-	-	-
	(0.008)	(0.096)	(0.009)						
Conflict in neighbor countries, weighted average	-0.103 *	0.223	-0.100 *	-	-	-	-	-	-
	(0.059)	(0.289)	(0.060)						
Displacement (instrument)	-	-71.029 ***	-	-	-75.440 **	-	-	6.2%	-
		(20.359)			(35.380)				
Observations	1,158	1,158	1,158	1,143	1,143	1,143	-1.3%	-1.3%	-1.3%
Number of countries	79	79	79	77	77	77	-2.5%	-2.5%	-2.5%
Country FE	YES	YES	YES	YES	YES	YES	-	-	-
Year FE	YES	YES	YES	YES	YES	YES	-	-	-
Country-specific time trends	CUBIC	CUBIC	CUBIC	CUBIC	CUBIC	CUBIC	-	-	-
Weather controls	YES	YES	YES	YES (annual)	YES (annual)	YES (annual)	-	-	-
First-stage, F-stat	n.a.	n.a.	12.17	n.a.	n.a.	4.159	-	-	-65.8%

Notes: Robust country-clustered standard errors in parentheses ***p < 0.01, **p<0.05, *p <0.10, #p<0.15. Stock-Wright LM p-values in square brackets. n.a.: not applicable.

Table 5. Extension of OLS-FE and 2SLS-IV using original source data
[*including additional countries and an additional year of data (2018*)]

The effect of humanitarian food aid on civil conflict incidence.

	Author			My replication using original source data			% Diff.		
	OLS-FE	2SLS-IV		OLS-FE	2SLS-IV		OLS-FE	2SLS-IV	
Dependent variable	**Conflict**	**First stage HFA**	**Second stage Conflict**	**Conflict**	**First stage HFA**	**Second stage Conflict**	**Conflict**	**First stage HFA**	**Second stage Conflict**
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Humanitarian food aid per capita (HFA)	-0.008 ***	-	-0.018 **	0.001	-	0.005	-111.4%	-	-129.7%
	(0.003)		[0.026]	(0.003)		(0.006)			
Other non-food aid per capita, log	-0.011	0.634 **	-0.010	-0.014	1.189 ***	-0.016	29.1%	87.5%	61.0%
	(0.023)	(0.281)	(0.023)	(0.026)	(0.380)	(0.023)			
Food aid per capita	-0.016 #	-0.099	-0.017 #	-0.015	-0.12	-0.0141	-8.8%	21.2%	-17.1%
	(0.011)	(0.169)	(0.011)	(0.012)	(0.149)	(0.011)			
Ethnic tensions	-0.662 **	0.031	-0.664 ***	-0.903 ***	0.538	-0.906 ***	36.4%	1635.5%	36.4%
	(0.290)	(1.161)	(0.293)	(0.297)	(1.472)	(0.262)			
Polity 2 score	0.013 #	0.023	0.014 *	-0.006	0.009	-0.006	-147.2%	-60.8%	-144.0%
	(0.008)	(0.043)	(0.008)	(0.010)	(0.038)	(0.009)			
GDP per capita, log	-0.616 **	-2.054 #	-0.701 ***	-0.456 *	-4.464 *	-0.406 *	-26.0%	117.3%	-42.1%
	(0.276)	(1.284)	(0.268)	(0.267)	(2.629)	(0.239)			
Inflation, log	-0.014	0.032	-0.014	0.000	-0.064	0.000	-96.8%	-299.7%	-97.3%
	(0.011)	(0.076)	(0.011)	(0.014)	(0.088)	(0.012)			
HFA in neighbor countries, weighted average	-0.003	0.124	0.001	-	-	-	-	-	-
	(0.008)	(0.096)	(0.009)						
Conflict in neighbor countries, weighted average	-0.103 *	0.223	-0.100 *	-	-	-	-	-	-
	(0.059)	(0.289)	(0.060)						
Displacement (instrument)	-	-71.029 ***	-	-	-91.060 ***	-	-	28.2%	-
		(20.359)			(34.130)				
Observations	1,158	1,158	1,158	1,320	1,320	1,320	14.0%	14.0%	14.0%
Number of countries	79	79	79	84	84	84	6.3%	6.3%	6.3%
Country FE	YES	YES	YES	YES	YES	YES	-	-	-
Year FE	YES	YES	YES	YES	YES	YES	-	-	-
Country-specific time trends	CUBIC	CUBIC	CUBIC	CUBIC	CUBIC	CUBIC	-	-	-
Weather controls	YES	YES	YES	YES (annual)	YES (annual)	YES (annual)	-	-	-
First-stage, F-stat	n.a.	n.a.	12.17	n.a.	n.a.	6.554	-	-	-46.1%

Notes: Robust country-clustered standard errors in parentheses ***p < 0.01, **p<0.05, *p <0.10, #p<0.15. Stock-Wright LM p-values in square brackets. n.a.: not applicable.

Table 6. Extension of OLS-FE and 2SLS-IV on minor and major conflict incidence using original source data [*including additional countries and an additional year of data (2018)*]

The effect of humanitarian food aid on civil conflict: alternative conflict outcomes.

	Author		My replication using original source data		% Diff.	
	2SLS-IV Second stage		2SLS-IV Second stage		2SLS-IV Second Stage	
Dependent variable	**Minor**	**Major**	**Minor**	**Major**	**Minor**	**Major**
	(1)	(2)	(1)	(2)	(1)	(2)
Humanitarian food aid per capita (HFA)	-0.015 *	-0.005 *	0.005	0.00647 *	-135.7%	-229.4%
	[0.062]	[0.099]	(0.006)	(0.004)		
Other non-food aid per capita, log	-0.011	-0.003	-0.016	-0.009	46.4%	199.7%
	(0.025)	(0.007)	(0.023)	(0.008)		
Food aid per capita	-0.020 *	0.001	-0.014	0.001	-29.5%	-43.5%
	(0.010)	(0.003)	(0.011)	(0.001)		
Ethnic tensions	-0.562 *	-0.200	-0.906 ***	0.015	61.2%	-107.5%
	(0.299)	(0.151)	(0.262)	(0.164)		
Polity 2 score	0.007	0.005	-0.006	-0.001	-188.0%	-116.8%
	(0.009)	(0.006)	(0.009)	(0.003)		
GDP per capita, log	-0.047	-0.707 ***	-0.406 *	-0.226	763.8%	-68.0%
	(0.162)	(0.233)	(0.239)	(0.207)		
Inflation, log	-0.013	0.002	0.000	0.006 #	-97.1%	191.0%
	(0.012)	(0.006)	(0.012)	(0.004)		
HFA in neighbor countries, weighted average	0.007	0.000	-	-	-	-
	(0.010)	(0.007)				
Conflict in neighbor countries, weighted average	-0.072	-0.021	-	-	-	-
	(0.057)	(0.027)				
Observations	1,158	1,158	1,320	1,320	14.0%	14.0%
Number of countries	79	79	84	84	6.3%	6.3%
Country FE	YES	YES	YES	YES	-	-
Year FE	YES	YES	YES	YES	-	-
Country-specific time trends	CUBIC	CUBIC	CUBIC	CUBIC	-	-
Weather controls	YES	YES	YES (annual)	YES (annual)	-	-
First-stage, F-stat	12.25	12.49	6.55	6.55	-46.5%	-47.5%

Notes: Robust country-clustered standard errors in parentheses ***p < 0.01, **p<0.05, *p <0.10, #p<0.15. Stock-Wright LM p-values in square brackets. n.a.: not applicable.

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