Appendix A for The Robust Relationship between US Food Aid and Civil Conflict: Semiparametric Endogenous Regression Estimator

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Here we introduce the Ozabaci, Henderson and Su (2014), hereafter OHS, procedure with a single endogenous regressor. They begin with the triangular system of Newey, Powell and Vella (1999)

$$\begin{cases} y = g(x, \mathbf{Z}_1) + \varepsilon, \\ x = m(\mathbf{Z}_1, \mathbf{Z}_2) + u,\ E(u|\mathbf{Z}_1, \mathbf{Z}_2) = 0, \\ E(\varepsilon|\mathbf{Z}_1, \mathbf{Z}_2, u) = E(\varepsilon|u), \end{cases}$$

where x is an endogenous regressor, $\mathbf{Z}_1 = (Z_{11}, \ldots, Z_{1d_1})'$ is a $d_1 \times 1$ vector of included exogenous regressors, $\mathbf{Z}_2 = (Z_{21}, \ldots, Z_{2d_2})'$ is a $d_2 \times 1$ vector of excluded instrumental variables, $g(\cdot)$ and $m(\cdot)$ are unknown smooth functions, and ε and u are error terms. Newey, Powell and Vella (1999) show that the unknown smooth function $g(\cdot)$ can be identified up to an additive constant as

$$E(y|x, \mathbf{Z}_1, \mathbf{Z}_2, u) = g(x, \mathbf{Z}_1) + E(\varepsilon|u).$$

To alleviate the curse of dimensionality, OHS assume that $g(x, \mathbf{Z}_1)$, $m(\mathbf{Z}_1, \mathbf{Z}_2)$, and $E(\varepsilon|u)$ have additive forms:

$$\begin{aligned} g(x, \mathbf{Z}_1) &= \mu_g + g_0(x) + g_1(Z_{11}) + \cdots + g_{d_1}(Z_{1d_1}), \\ m(\mathbf{Z}_1, \mathbf{Z}_2) &= \mu_m + m_1(Z_{11}) + \cdots + m_{d_1}(Z_{1d_1}) + m_{d_1+1}(Z_{21}) + \cdots + m_{d_1+d_2}(Z_{2d_2}), \\ E(\varepsilon|u) &= \mu_\varepsilon + g_{d_1+1}(u), \end{aligned}$$

and hence

$$\begin{aligned} E(y|x, \mathbf{Z}_1, \mathbf{Z}_2, u) &= \mu + g_0(x) + g_1(Z_{11}) + \cdots + g_{d_1}(Z_{1d_1}) + g_{d_1+1}(u) \\ &\equiv \overline{g}(x, \mathbf{Z}_1, u), \end{aligned}$$

where $\mu = \mu_g + \mu_\varepsilon$.

The estimation procedure is conducted in three stages.

1. Let $\widehat{\mu}_m$ and $\widehat{m}_k(\cdot), k = 1, \ldots, d_1+d_2$ denote series estimates (i.e., B-spline smoothing) of μ_m and $m_k(\cdot), k = 1, \ldots, d_1+d_2$ in the nonparametric additive model $x = m(\mathbf{Z}_1, \mathbf{Z}_2)+u$. Let $\widehat{u} \equiv x - \widehat{m}(\mathbf{Z}_1, \mathbf{Z}_2)$.

2. Let $\widehat{\mu}$ and $\widehat{g}_j(\cdot), j = 0, \ldots, d_1 + 1$ denote series estimates (i.e., B-spline smoothing) of μ and $g_j(\cdot), j = 0, \ldots, d_1 + 1$ in the nonparametric additive model $y = \overline{g}(x, \mathbf{Z}_1, u) + v$.

3. Estimate $g_0(x)$ and its first-order derivative by the local-linear regression of $\widetilde{y} = y - \widehat{\mu} - \widehat{g}_1(\cdot) - \cdots - \widehat{g}_{d_1+1}(\cdot)$ on x. The conditional mean estimates can be constructed by $\widehat{y} = \widehat{\mu} + \widetilde{g}_0(\cdot) + \widehat{g}_1(\cdot) + \cdots + \widehat{g}_{d_1+1}(\cdot)$, where $\widetilde{g}_0(\cdot)$ is the local-linear estimate.

OHS show that the estimators for the conditional mean and gradient are consistent, asymptotically normal, oracle efficient, and free from the curse of dimensionality.

For comparability to Nunn and Qian (2014), we choose to employ the OHS procedure in a partially linear setting. For example, Equations (1) and (2) can be represented as

$$m(\mathbf{Z}_1, \mathbf{Z}_2) + \psi' \mathbf{V} = \mu_m + m_1(Z_{11}) + \cdots + m_{d_1}(Z_{1d_1}) + m_{d_1+1}(Z_{21}) + \cdots + m_{d_1+d_2}(Z_{2d_2}) + \psi' \mathbf{V}$$

and

$$\begin{aligned} E(y|x, \mathbf{Z}_1, \mathbf{Z}_2, u, \mathbf{V}) &= \mu + g_0(x) + g_1(Z_{11}) + \cdots + g_{d_1}(Z_{1d_1}) + g_{d_1+1}(u) + \theta' \mathbf{V} \\ &\equiv \overline{g}(x, \mathbf{Z}_1, u) + \theta' \mathbf{V}, \end{aligned}$$

where $\mathbf{V} = (V_1, \ldots, V_k)'$ is a $k \times 1$ vector of exogenous regressors, ψ is a $k \times 1$ parameter vector, and θ is a $k \times 1$ parameter vector. When the OHS procedure is applied to partially linear models, parametric components can be estimated at the root-n rate and do not affect the asymptotic properties of nonparametric estimators.

Newey W, Powell JL, Vella F. 1999. Nonparametric Estimation of Triangular Simultaneous Equation Models. *Econometrica* 67: 565-603.

Appendix B for The Robust Relationship between US Food Aid and Civil Conflict: A Test for Correct Parametric Specification

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In this paper, we use the goodness-of-fit test from Ullah (1985) as a correct parametric specification test. This test is similar to a standard F-test and takes the restricted model as the assumed parametric specification, and the unrestricted model is the semiparametric specification. Formally, the statistic proposed by Ullah (1985) is

$$\widehat{I}_n = \frac{\sum_{i=1}^{n} \widehat{u}_i^2 - \sum_{i=1}^{n} \widetilde{u}_i^2}{\sum_{i=1}^{n} \widetilde{u}_i^2},$$

where $\widehat{u}_i$ and $\widetilde{u}_i$ are the residuals obtained from the parametric and semiparametric models, respectively. In our setting, the semiparametric models are Equations (1) and (2) in our paper, and the parametric models are from Nunn and Qian (2014, pp. 1657-1658). Their models can be represented as

$$\begin{aligned}
C_{irt} &= \theta_1 F_{irt} + \theta_2 (F_{irt} \times 1_{ir}) \\
&\quad + \mathbf{X}_{irt}\Pi + \alpha_i + \beta_r + \gamma_t + \delta_{rt} + \epsilon_{irt}, \\
F_{irt} &= \eta_1 IV_{irt-1} + \eta_2 (IV_{irt-1} \times 1_{ir}) + \eta_3 (P_{t-1} \times 1_{ir}) \\
&\quad + \mathbf{X}_{irt}\Pi + \alpha_i + \beta_r + \gamma_t + \delta_{rt} + \epsilon_{irt}, \\
F_{irt} \times 1_{ir} &= \eta_1 IV_{irt-1} + \eta_2 (IV_{irt-1} \times 1_{ir}) + \eta_3 (P_{t-1} \times 1_{ir}) \\
&\quad + \mathbf{X}_{irt}\Pi + \alpha_i + \beta_r + \gamma_t + \delta_{rt} + \epsilon_{irt},
\end{aligned}$$

where $1_{ir} \equiv 1(1_{ir} > 1_{Median})$, see our paper for the definitions of variables.

Here we use the wild bootstrap to construct the sampling distribution of the bootstrapped test statistics and this bootstrap allows for the errors to be heteroskedastic. For expositional convenience, we denote ϵ_{irt} from the three equations above as $\epsilon_{irt} = (\epsilon_{3,irt}, \epsilon_{1,irt}, \epsilon_{2,irt})$, respectively, and denote F_{irt} and $F_{irt} \times 1_{ir}$ as $F_{1,irt}$ and $F_{2,irt}$, respectively. Under the null hypothesis that the parametric model is correctly specified, the steps for the wild bootstrapped version for our setting are as follows:

1. Calculate the test statistic $\widehat{I}_n$ for the original sample.

2. Jointly construct three centered bootstrapped residuals ϵ^*_{irt}, where $\epsilon^*_{irt} = \frac{1-\sqrt{5}}{2}(\widehat{\epsilon}_{irt} - \overline{\widehat{\epsilon}})$ with probability $\frac{1+\sqrt{5}}{2\sqrt{5}}$ and $\epsilon^*_{irt} = \frac{1+\sqrt{5}}{2}(\widehat{\epsilon}_{irt} - \overline{\widehat{\epsilon}})$ with probability $\left(1 - \frac{1+\sqrt{5}}{2\sqrt{5}}\right)$ for each observation, where $\epsilon^*_{irt} = (\epsilon^*_{3,irt}, \epsilon^*_{1,irt}, \epsilon^*_{2,irt})$.

3. Construct the bootstrapped left-hand-side variables $F^*_{1,irt}$ and $F^*_{2,irt}$ as $\widehat{F}_{1,irt} + \epsilon^*_{1,irt}$ and $\widehat{F}_{2,irt} + \epsilon^*_{2,irt}$, respectively, for each observation.[1]

[1] $\widehat{F}_{1,irt}$ and $\widehat{F}_{2,irt}$ are the original fitted values $\widehat{\eta}_1 IV_{irt-1} + \widehat{\eta}_2 (IV_{irt-1} \times 1_{ir}) + \widehat{\eta}_3 (P_{t-1} \times 1_{ir}) + \mathbf{X}_{irt}\widehat{\Pi} + \widehat{\alpha}_i + \widehat{\beta}_r + \widehat{\gamma}_t + \widehat{\delta}_{rt}$.

4. Construct the bootstrapped left-hand-side variable C^*_{irt} as $\widehat{\theta}_1 F^*_{1,irt} + \widehat{\theta}_2 F^*_{2,irt} + \mathbf{X}_{irt}\widehat{\Pi} + \widehat{\alpha}_i + \widehat{\beta}_r + \widehat{\gamma}_t + \widehat{\delta}_{rt} + \epsilon^*_{3,irt}$ for each observation.

5. Calculate $\widehat{I}^*_n$ where $\widehat{I}^*_n$ is calculated the same way as $\widehat{I}_n$, except C_{irt} is replaced by C^*_{irt}.[2]

6. Repeat Steps 2-5 a large number of times and then construct the sampling distribution of the bootstrapped test statistics. We reject the null hypothesis if the estimated test statistic $\widehat{I}_n$ is greater than the upper α-percentile of the bootstrapped test statistics, where α is the significance level.

[2] $F^*_{1,irt}$ and $F^*_{2,irt}$ are used to construct C^*_{irt}, but they do not enter the final bootstrap sample for estimation. In addition, the bandwidth used for the third stage of the OHS procedure is the same as the initial estimator.

Appendix C for The Robust Relationship between US Food Aid and Civil Conflict: Narrow Replication Results

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Our replication results are shown in the following thirteen tables (Tables C1-C13). For ease of comparison, our tabular formats are similar to Tables 1-13 in Nunn and Qian (2014), see their paper for all the details on the tables.

Table 1: Descriptive Statistics

Variable	Observations	Mean	SD
Conflict:			
Any conflict	4,089	0.217	0.412
Intrastate conflict	4,089	0.176	0.381
Interstate conflict	4,089	0.026	0.160
Onset of intrastate conflict (all observations)	4,089	0.034	0.181
Onset of intrastate conflict (observations following no conflict)	3,377	0.041	0.199
Onset of intrastate conflict (hazard model sample)	1,454	0.063	0.244
Offset of intrastate conflict (hazard model sample)	709	0.185	0.388
US wheat aid (1,000 MT)	4,089	27.61	116.61
Frequency of receiving any US food aid	4,089	0.374	0.312
Lagged US wheat production (1,000 MT)	4,089	59,053	9,176

Table C2: The Effect of Food Aid on Conflict: Baseline Specification with $P_{t-1} \times \overline{D}_{ir}$ as the Instrument

	Parsimonious specifications				Baseline specification		
Dependent variable	Any conflict (1)	Any conflict (2)	Any conflict (3)	Any conflict (4)	Any conflict (5)	Intrastate (6)	Interstate (7)
OLS estimates							
US wheat aid	-0.00006	-0.00010	-0.00008	-0.00007	-0.00011	-0.00005	-0.00011
	(0.00018)	(0.00017)	(0.00016)	(0.00017)	(0.00017)	(0.00018)	(0.00004)
R^2	0.508	0.517	0.527	0.534	0.549	0.523	0.385
Reduced form estimates							
Instrument	0.00829	0.00983	0.01001	0.01133	0.01071	0.00909	-0.00158
	(0.00257)	(0.00306)	(0.00306)	(0.00318)	(0.00320)	(0.00322)	(0.00121)
R^2	0.511	0.520	0.529	0.537	0.551	0.526	0.382
2SLS estimates							
US wheat aid	0.00364	0.00281	0.00289	0.00343	0.00299	0.00254	-0.00044
	(0.00182)	(0.00113)	(0.00105)	(0.00114)	(0.00104)	(0.00096)	(0.00035)
Dependent variable	US wheat aid						
First-stage estimates							
Instrument	0.00227	0.00350	0.00346	0.00330	0.00358	0.00358	0.00358
	(0.00094)	(0.00109)	(0.00103)	(0.00092)	(0.00103)	(0.00103)	(0.00103)
Kleibergen-Paap statistic	5.84	10.25	11.42	12.76	12.10	12.10	12.10
Observations	4,089	4,089	4,089	4,089	4,089	4,089	4,089

Table C3: The Effect of Food Aid on Conflict: Alternative Specification with P_{t-1} as the Instrument

	Parsimonious specifications				Baseline specification		
Dependent variable	Any conflict (1)	Any conflict (2)	Any conflict (3)	Any conflict (4)	Any conflict (5)	Intrastate (6)	Interstate (7)
OLS estimates							
US wheat aid	-0.00000	0.00000	0.00000	0.00000	-0.00000	0.00006	-0.00004
	(0.00019)	(0.00019)	(0.00019)	(0.00019)	(0.00020)	(0.00019)	(0.00003)
R^2	0.477	0.477	0.481	0.483	0.485	0.460	0.245
Reduced form estimates							
Instrument	0.00224	0.00254	0.00254	0.00251	0.00255	0.00183	0.00087
	(0.00078)	(0.00087)	(0.00086)	(0.00086)	(0.00086)	(0.00081)	(0.00042)
R^2	0.479	0.480	0.484	0.486	0.488	0.461	0.246
2SLS estimates							
US wheat aid	0.00507	0.00380	0.00365	0.00359	0.00367	0.00263	0.00125
	(0.00395)	(0.00224)	(0.00210)	(0.00207)	(0.00214)	(0.00163)	(0.00095)
Anderson-Rubin	[0.00257,	[0.00207,	[0.00198,	[0.00194,	[0.00200,	[0.00118,	[0.00052,
90% confidence interval	0.01253]	0.00718]	0.00681]	0.00670]	0.00684]	0.00514]	0.00250]
Dependent variable	US wheat aid						
First-stage estimates							
Instrument	0.000443	0.000670	0.000697	0.000699	0.000696	0.000696	0.000696
	(0.000327)	(0.000359)	(0.000374)	(0.000377)	(0.000380)	(0.000380)	(0.000380)
Kleibergen-Paap statistic	1.83	3.47	3.46	3.44	3.35	3.35	3.35
Observations	4,089	4,089	4,089	4,089	4,089	4,089	4,089

Table C4: The Effect of Food Aid on Conflict: Controlling for A Lagged Dependent Variable

	Parsimonious specifications				Baseline specification		
Dependent variable	Any conflict (1)	Any conflict (2)	Any conflict (3)	Any conflict (4)	Any conflict (5)	Intrastate (6)	Interstate (7)
OLS estimates							
US wheat aid	-0.00003	-0.00005	-0.00005	-0.00004	-0.00006	-0.00004	-0.00006
	(0.00008)	(0.00008)	(0.00008)	(0.00008)	(0.00008)	(0.00008)	(0.00003)
R^2	0.664	0.669	0.673	0.677	0.684	0.677	0.470
Reduced form estimates							
Instrument	0.00435	0.00583	0.00590	0.00689	0.00640	0.00560	-0.00110
	(0.00144)	(0.00182)	(0.00189)	(0.00204)	(0.00207)	(0.00215)	(0.00085)
R^2	0.665	0.670	0.674	0.678	0.685	0.678	0.469
2SLS estimates							
US wheat aid	0.00187	0.00165	0.00169	0.00207	0.00177	0.00157	-0.00031
	(0.00092)	(0.00066)	(0.00063)	(0.00071)	(0.00066)	(0.00067)	(0.00028)
Dependent variable	US wheat aid						
First-stage estimates							
Instrument	0.00233	0.00354	0.00349	0.00332	0.00362	0.00357	0.00349
	(0.00103)	(0.00118)	(0.00109)	(0.00098)	(0.00111)	(0.00109)	(0.00099)
Kleibergen-Paap statistic	5.07	9.06	10.26	11.53	10.67	10.77	12.35
Observations	4,071	4,071	4,071	4,071	4,071	4,071	4,071

Table C5: Reduced-Form Estimates of the Effect of Placebo Instruments on Civil Conflict

	Dependent variable: civil conflict					
	Baseline	Panel A. Placebo crops I				
	(1)	(2)	(3)	(4)	(5)	(6)
Crop for instrument	Wheat	Oranges	Grapes	Lettuce	Cotton lint	Onions
Mean production	[59,316]	[9,070]	[5,145]	[3,432]	[3,350]	[2,394]
Instrument	0.00909	-0.01977	0.04829	-0.07370	-0.03456	-0.09758
	(0.00322)	(0.01960)	(0.03094)	(0.10534)	(0.04588)	(0.15060)
Standardized beta	0.452	-0.154	0.212	-0.218	-0.101	-0.210
R^2	0.526	0.526	0.526	0.526	0.526	0.526
Observations	4,089	4,089	4,089	4,089	4,089	4,089
		Panel B. Placebo crops II				
		(7)	(8)	(9)	(10)	(11)
Crop for instrument		Grapefruit	Cabbages	Watermelons	Carrots and turnips	Peaches and nectarines
Mean production		[2,268]	[1,596]	[1,429]	[1,395]	[1,331]
Instrument		-0.00588	-0.08000	-0.34902	-0.22736	0.17813
		(0.08511)	(0.07137)	(0.20577)	(0.13532)	(0.17234)
Standardized beta		-0.011	-0.114	-0.430	-0.288	0.198
R^2		0.526	0.526	0.526	0.526	0.526
Observations		4,089	4,089	4,089	4,089	4,089

Table C6: The Effect of Food Aid on Civil Conflict: Robustness to Alternative Specifications

Dependent variable: civil conflict	Baseline specification (1)	Instrument: Lagged US wheat prod. × lagged 1-year food aid prob. (2)	Instrument: Lagged US wheat prod. × lagged 2-year avg. food aid prob. (3)	Instrument: Lagged US wheat prod. × lagged 4-year avg. food aid prob. (4)	Normalizing US wheat aid by population (5)
Panel A. Alternative specifications I					
US wheat aid	0.00254	0.00284	0.00273	0.00203	0.0351
	(0.00096)	(0.00177)	(0.00163)	(0.00310)	(0.0157)
Standardized beta	0.777	0.866	0.834	0.621	0.681
Kleibergen-Paap statistic	12.10	7.11	8.88	1.80	17.61
Observations	4,089	3,980	3,870	3,647	4,089
Dependent variable: civil conflict	Taking natural logs of US wheat aid and production (6)	Dropping former Sovict Union Countries (7)	Dropping years 1971-1973 (8)	Including lagged US wheat aid (9)	Including lead US wheat aid (10)
Panel B. Alternative specifications II					
US wheat aid	0.165	0.00266	0.00273	0.00439	0.00368
	(0.0585)	(0.00099)	(0.00118)	(0.00284)	(0.00313)
US wheat aid (year $t-1$)				-0.00288	
				(0.00362)	
US wheat aid (year $t+1$)					-0.00112
					(0.00342)
Standardized beta	0.760	0.828	0.837	1.342	1.140
Kleibergen-Paap statistic(s)	21.92	11.41	13.80	7.52; 9.21	9.48; 8.57
Observations	4,089	3,858	3,798	3,980	3,964

Table C7: The Effect of Food Aid on Civil Conflict Onset and Duration

	Civil war onset		Civil war onset			Civil war offset		
	Collier and Hoefler (2004)	Fearon and Laitin (2003)	Logisitic discrete time hazard model			Logisitic discrete time hazard model		
Dependent variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Mean of dep. var.	0.041	0.034	0.063	0.063	0.063	0.185	0.185	0.185
US wheat aid	0.00102	0.00061	0.000064	0.000038	-0.000012	-0.000428	-0.000507	-0.000592
	(0.00088)	(0.00047)	(0.000256)	(0.000242)	(0.000305)	(0.000250)	(0.000226)	(0.000304)
First-stage F statistic	4.11	12.10	26.07	23.30	20.61	17.29	17.30	23.77
Observations	3,377	4,089	1,454	1,454	1,454	709	709	709

Table C8: The Effect of Food Aid on Small- and Large-Scale Conflicts

	Small wars only			Large wars only		
	Any	Intrastate	Interstate	Any	Intrastate	Interstate
Dependent variable	(1)	(2)	(3)	(4)	(5)	(6)
Mean of dep. var.	0.141	0.120	0.012	0.076	0.056	0.014
US wheat aid	0.00170	0.00164	-0.00006	0.00129	0.00090	-0.00038
	(0.00097)	(0.00094)	(0.00017)	(0.00099)	(0.00092)	(0.00035)
Kleibergen-Paap statistic	12.10	12.10	12.10	12.10	12.10	12.10
Observations	4,089	4,089	4,089	4,089	4,089	4,089

Table C9: The Effect of Food Aid on Other Aid

Depedent variable	World wheat aid (1)	World cereal aid (2)	Non-US wheat aid (3)	Non-US cereal aid (4)	US military aid (5)	US econ. aid excl. food aid (6)	Non-US net ODA (7)	Non-US net ODA 2 (8)
Mean of dep. var.	42.06	63.21	13.56	18.82	34,060	60,284	430,131	407,749
US wheat aid	1.226	1.211	0.233	0.133	1,073	776	1,923	1,443
	(0.132)	(0.304)	(0.129)	(0.186)	(484)	(639)	(1,309)	(934)
Kleibergen-Paap statistic	12.10	12.10	12.10	12.10	12.10	12.10	12.10	12.10
Observations	4,089	4,089	4,089	4,089	4,089	4,089	4,089	4,089

Table C10: The Effect of Food Aid on Recipient Country Cereal Production

Depedent variable	Recipient wheat production (1)	Recipient cereal production (2)	Recipient wheat price (Windsorized) (3)	Recipient wheat price (natural log) (4)
Mean of dep. var.	4,178.6	10,162.5	527.3	7.78
US wheat aid	-7.206	-7.177	-0.329	-0.00094
	(6.521)	(10.572)	(0.533)	(0.00461)
Kleibergen-Paap statistic	8.99	13.23	7.14	7.14
Observations	2,368	3,736	1,737	1,737

Table C11: Heterogenous Effects of Food Aid on Civil Conflict: Conflict Prior to Food Aid

Dependent variable: civil conflict	(1)	20 year window (2)	15 year window (3)	10 year window (4)	5 year window (5)
US wheat aid	0.00253	0.00320	0.00376	0.00381	0.00446
	(0.00096)	(0.00138)	(0.00143)	(0.00161)	(0.00283)
US wheat aid × no past conflict		-0.00579	-0.00783	-0.00735	-0.00607
		(0.00382)	(0.00561)	(0.00499)	(0.00399)
US wheat aid +		-0.00259	-0.00407	-0.00354	-0.00161
(US wheat aid × no past conflict)		(0.00324)	(0.00508)	(0.00420)	(0.00179)
Kleibergen-Paap statistic(s)	11.68	4.32; 0.32	4.15; 0.39	3.85; 0.68	3.21; 1.65
Observations	4,071	4,071	4,071	4,071	4,071

Table C12: Heterogenous Effects of Food Aid on Civil Conflict: Potential Contributors to Civil Conflict

Dependent variable: civil conflict	(1)	(2)	(3)	(4)	(5)	(6)	(7)
US wheat aid	0.00254	0.00155	0.00270	0.00222	0.00516	0.00770	0.00503
	(0.00096)	(0.00090)	(0.00111)	(0.00141)	(0.00250)	(0.00650)	(0.00377)
US wheat aid × indicator for							
Hight income		0.00305					
		(0.00305)					
High resource dependence			-0.00030				
			(0.00224)				
High polity (democratic)				0.00043			
				(0.00268)			
Low ethnic polarization					-0.00469		-0.00498
					(0.00279)		(0.00595)
Low ethnic diversity						-0.00743	0.00019
						(0.00787)	(0.00854)
US wheat aid +		0.00460	0.00240	0.00265	0.00047	0.00027	0.00024
(US wheat aid × indicator)		(0.00276)	(0.00182)	0.00189	(0.00091)	(0.00157)	(0.00092)
Kleibergen-Paap statistic(s)	12.10	4.85; 3.63	4.76; 2.35	5.53; 2.77	6.27; 2.18	4.76; 3.42	4.23; 1.57; 2.69
Observations	4,089	4,089	4,089	3,942	3,635	4,048	3,594

Table C13: Heterogenous Effects of Food Aid on Civil Conflict: Potential Contributors to Food Aid Misappropriation

Dependent variable: civil conflict	(1)	(2)	(3)	(4)	(5)	(6)
US wheat aid	0.00254	0.00186	0.00292	0.00248	0.00353	0.00266
	(0.00096)	(0.00107)	(0.00097)	(0.00130)	(0.00143)	(0.00131)
US wheat aid × indicator for						
Low cereal producer		0.00231				
		(0.00286)				
Low cereal production years			-0.00093			
			(0.00089)			
High road denstiy				-0.00127		
				(0.00301)		
Cold war years					-0.00172	
					(0.00130)	
Alighed with the US (UN voting)						-0.00117
						(0.00311)
US wheat aid +		0.00417	0.00199	0.00121	0.00181	0.00149
(US wheat aid × indicator)		(0.00248)	(0.00102)	(0.00214)	(0.00078)	(0.00226)
Kleibergen-Paap statistic(s)	12.10	5.48; 6.36	4.58; 4.54	4.32; 2.30	4.43; 4.19	7.27; 8.24
Observations	4,089	4,089	3,639	4,084	4,089	4,084

Appendix D for The Robust Relationship between US Food Aid and Civil Conflict: Parametric and Semiparametric Results

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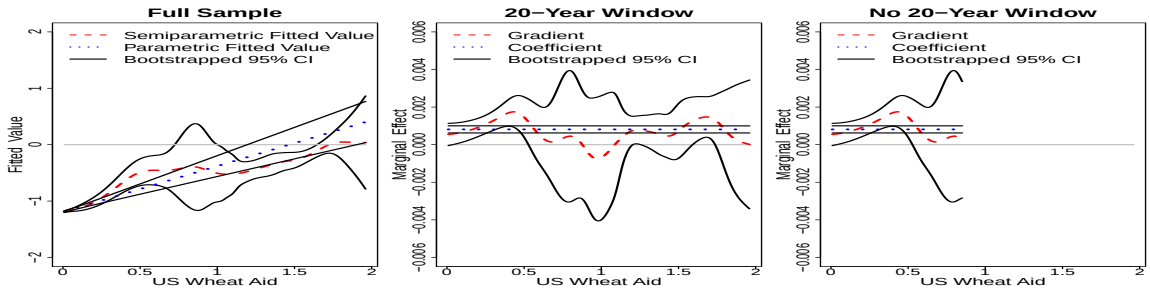
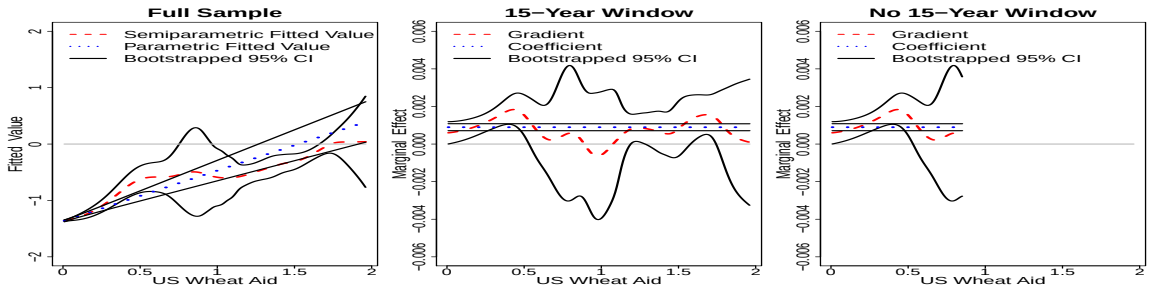
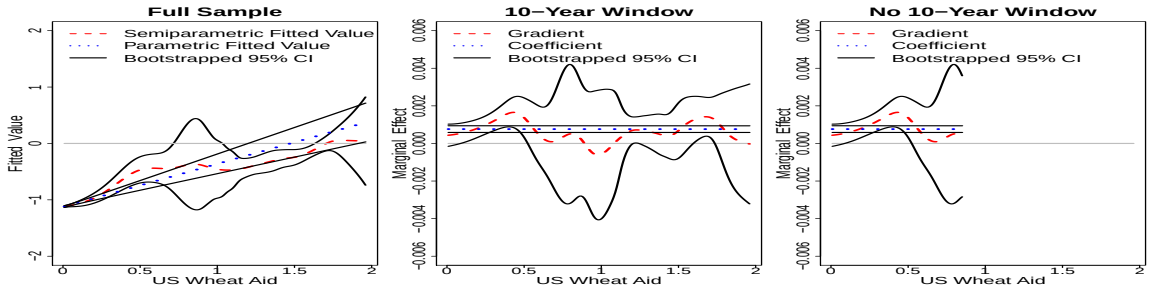
Figures 1-3 show both the parametric and semiparametric results for country characteristics (1)-(4), (5)-(9), and (10)-(14), respectively, which correspond to Tables 11-13 in Nunn and Qian (2014).



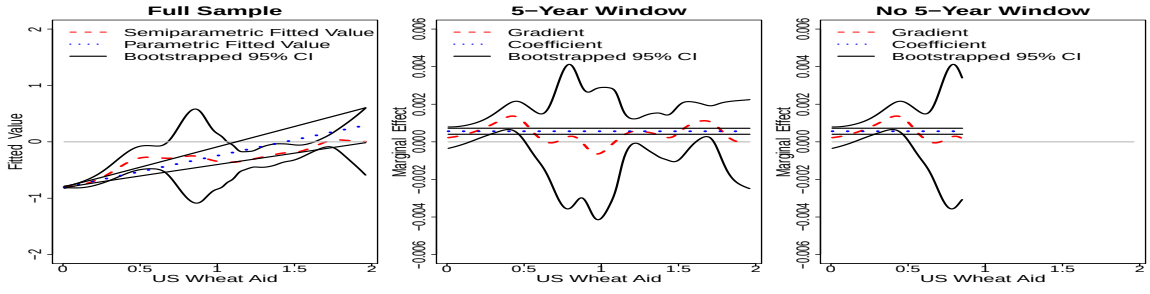
(a) Twenty Year Window without Conflict



(b) Fifteen Year Window without Conflict

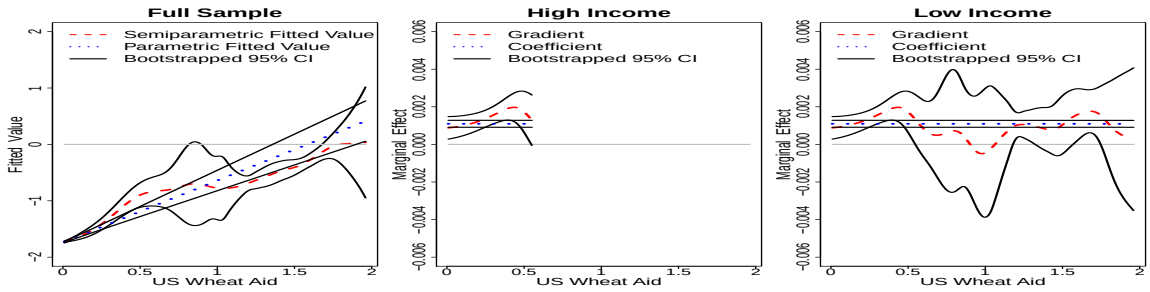


(c) Ten Year Window without Conflict

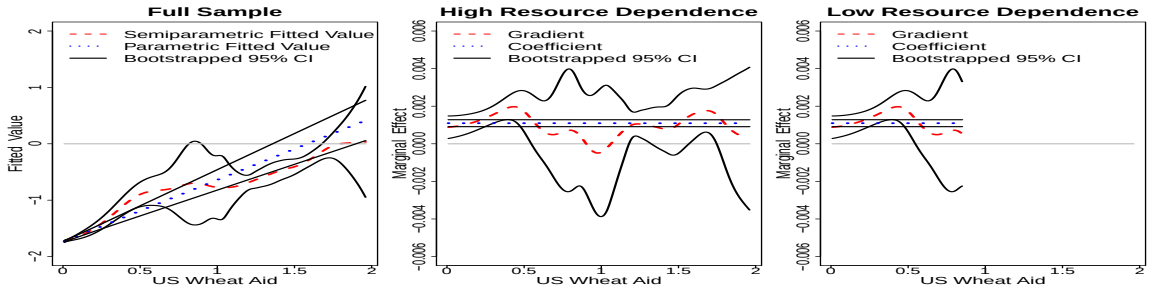


(d) Five Year Window without Conflict

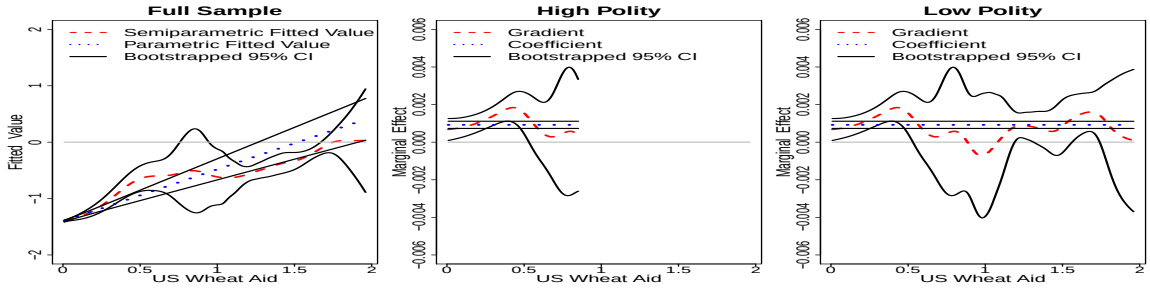
Figure D1: Parametric and semiparametric fitted values (first column) and gradients (second and third columns) with 95-percent confidence bounds obtained via 399 bootstrap replications (see footnote 5 for further details)



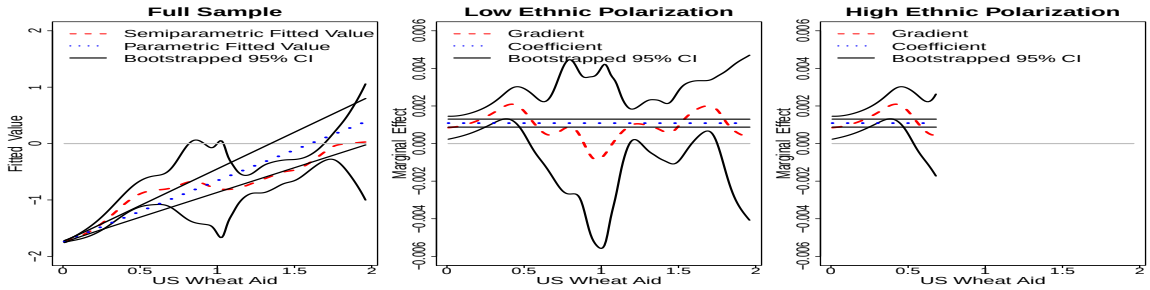
(a) Income Level



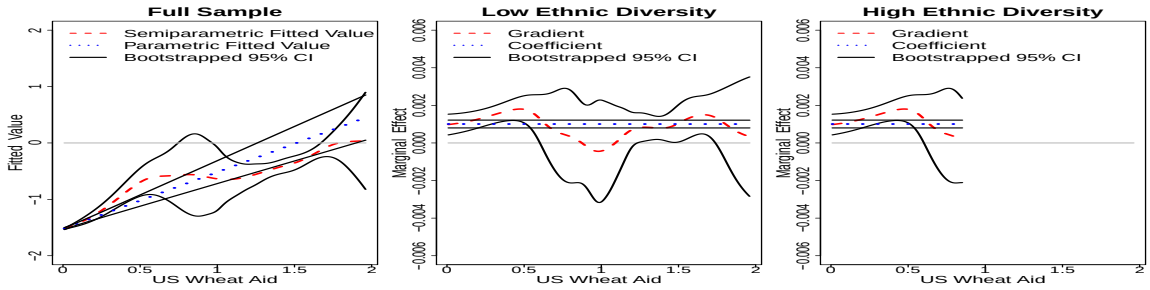
(b) Resource Dependence



(c) Polity

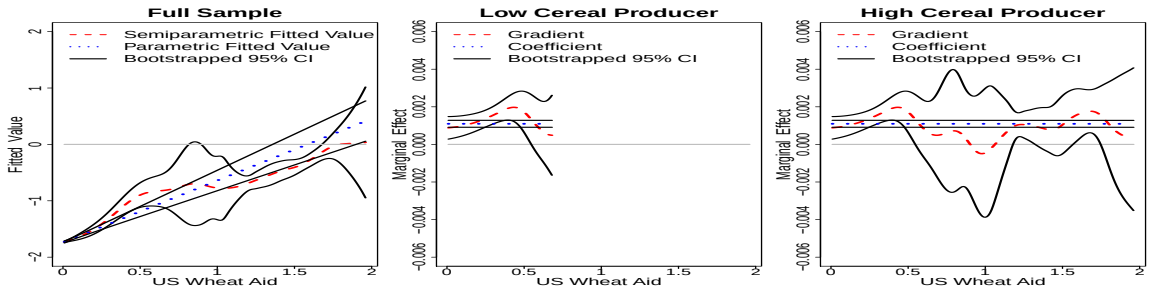


(d) Ethnic Polarization

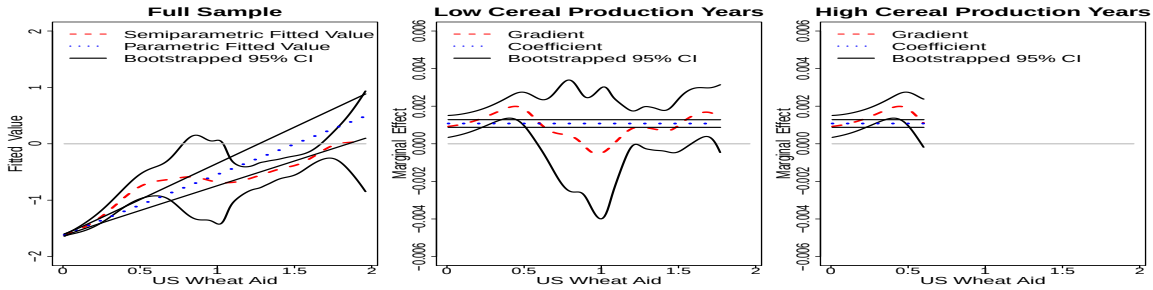


(e) Ethnic Diversity

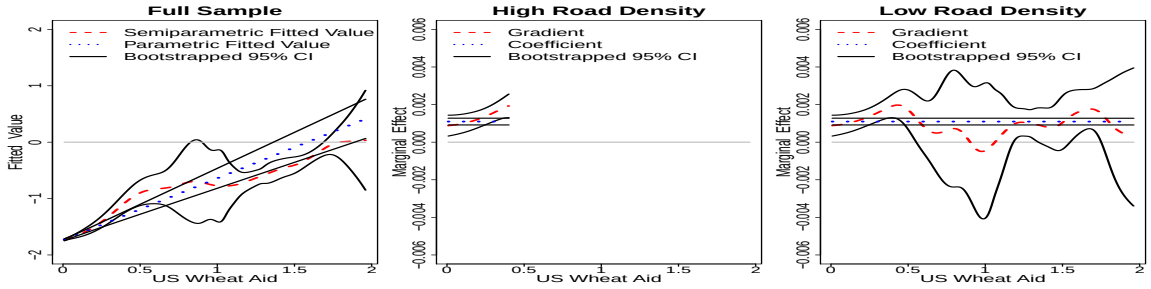
Figure D2: Parametric and semiparametric fitted values (first column) and gradients (second and third columns) with 95-percent confidence bounds obtained via 399 bootstrap replications (see footnote 5 for further details)



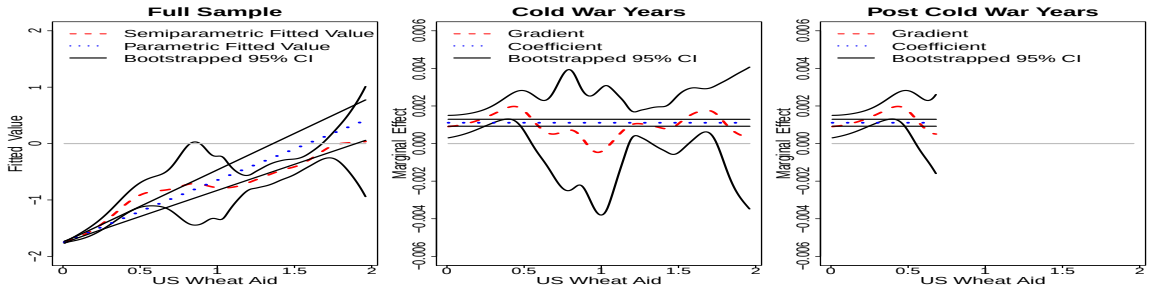
(a) Cereal Production Capacity



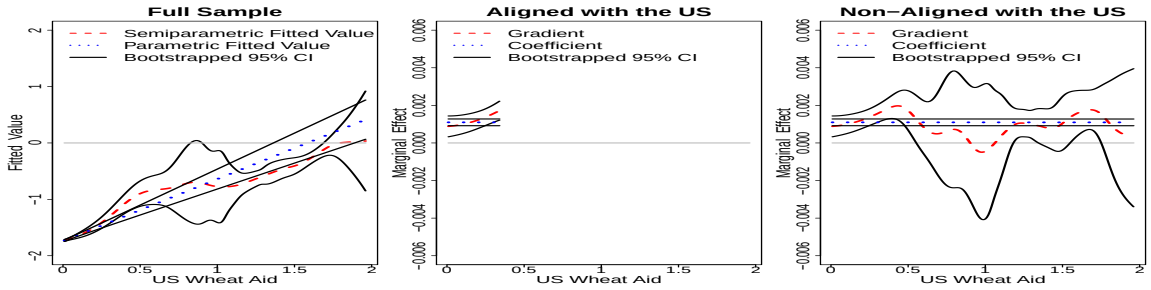
(b) Cereal Production Years



(c) Road Density



(d) US Wheat Aid Policy



(e) Political Alliance

Figure D3: Parametric and semiparametric fitted values (first column) and gradients (second and third columns) with 95-percent confidence bounds obtained via 399 bootstrap replications (see footnote 5 for further details)