

Foreign Aid and Soft Power: Great Power Competition in Africa in the Early 21st Century

January 4, 2021

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1 Body of Paper

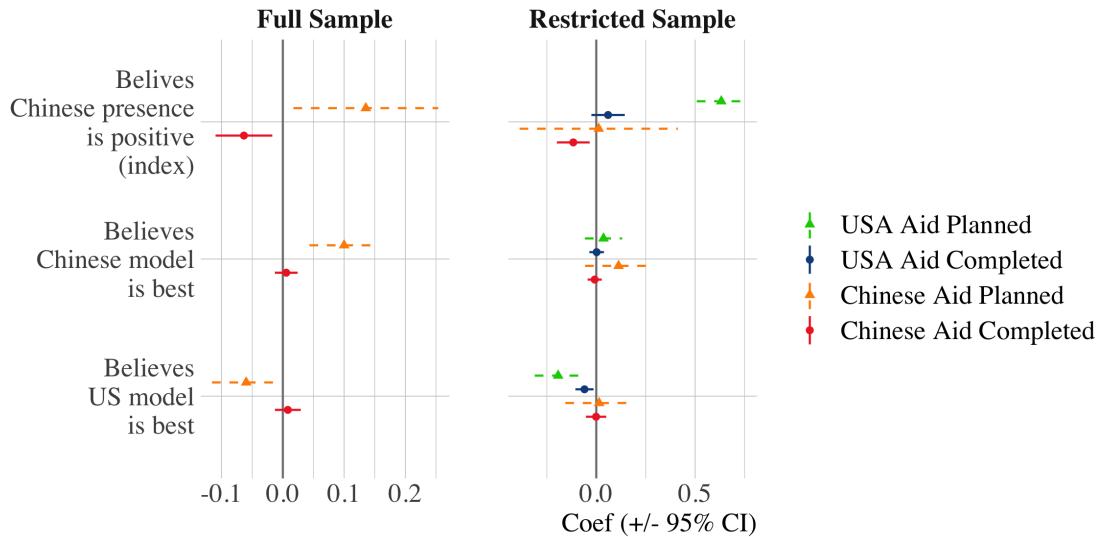


Figure 1: Effects of Chinese and US aid on perceptions of China and the US

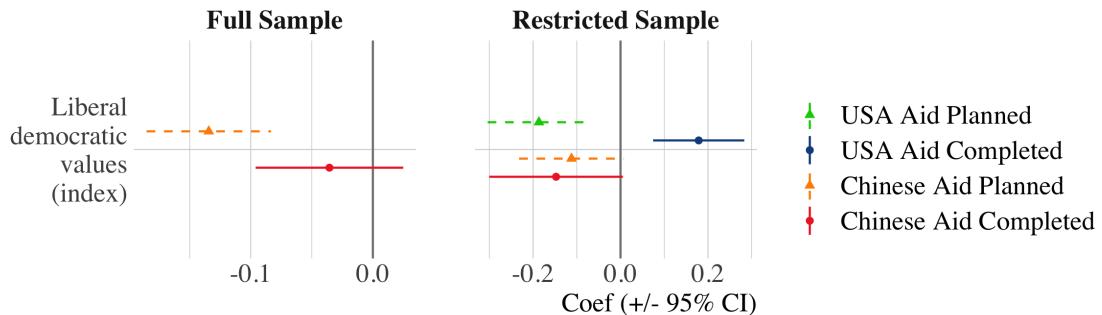


Figure 2: Effects of Chinese and US aid on liberal democratic values

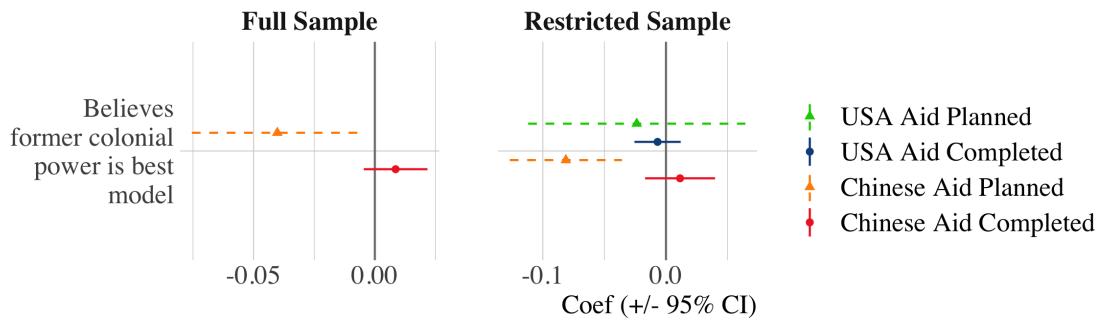


Figure 3: Effects of Chinese and US aid on perceptions of former colonial powers

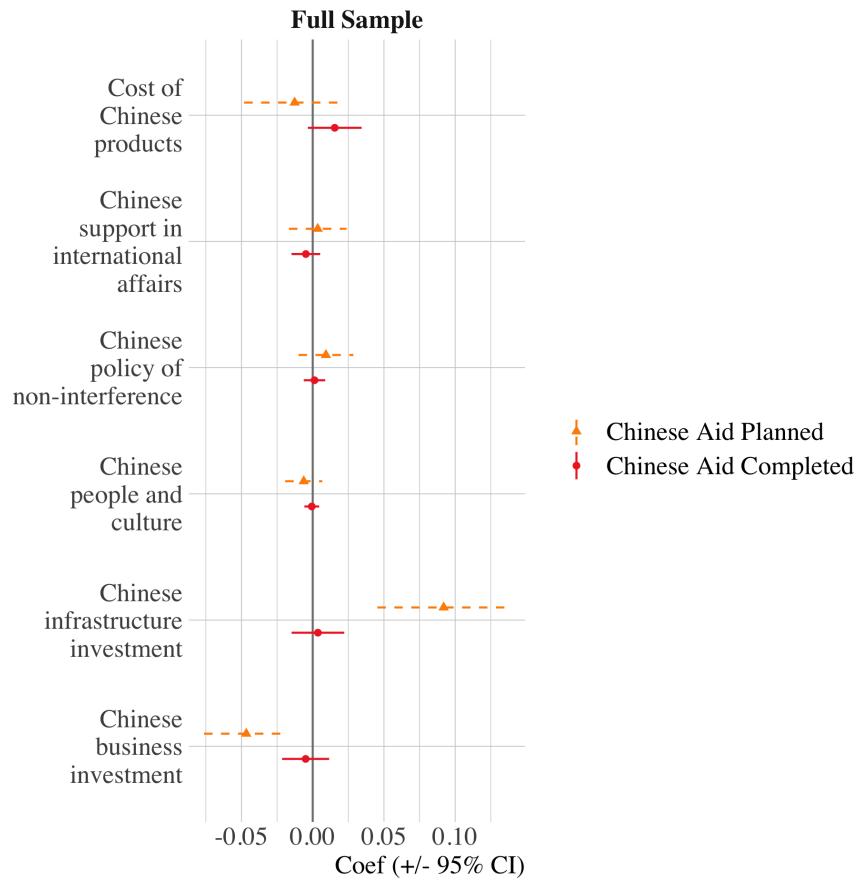


Figure 4: Effects of Chinese aid on factors contributing to positive image of China

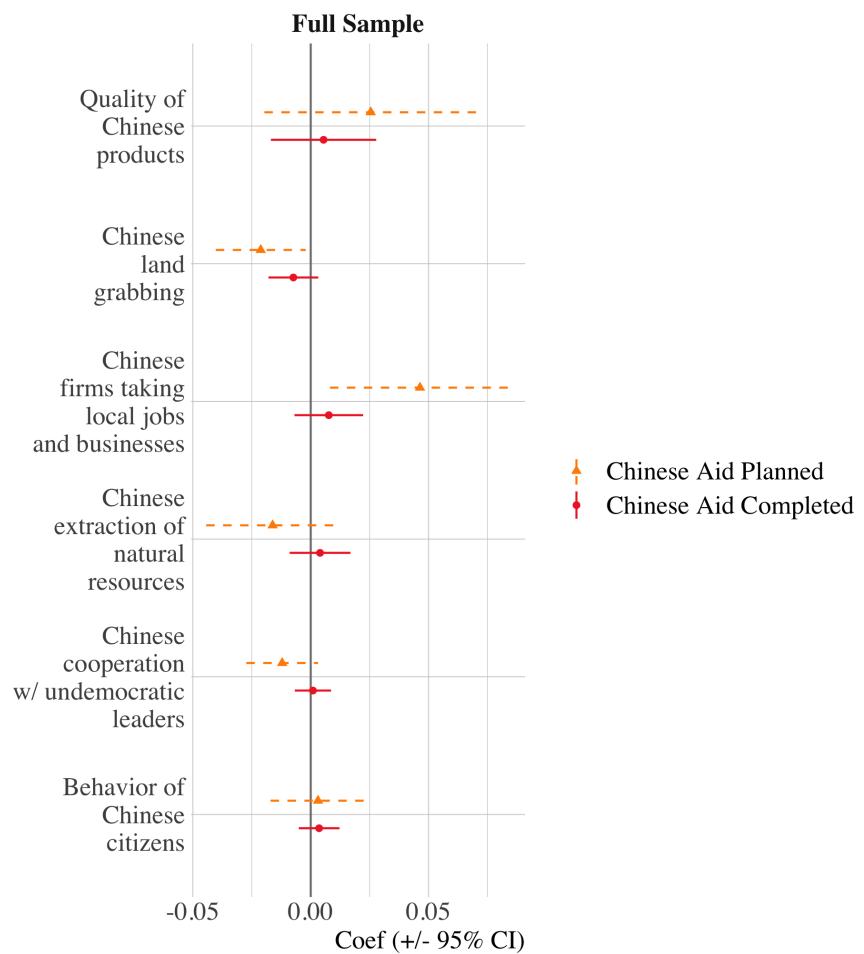


Figure 5: Effects of Chinese aid on factors contributing to negative image of China

A Appendix 1: Coding Rules and Descriptive Statistics

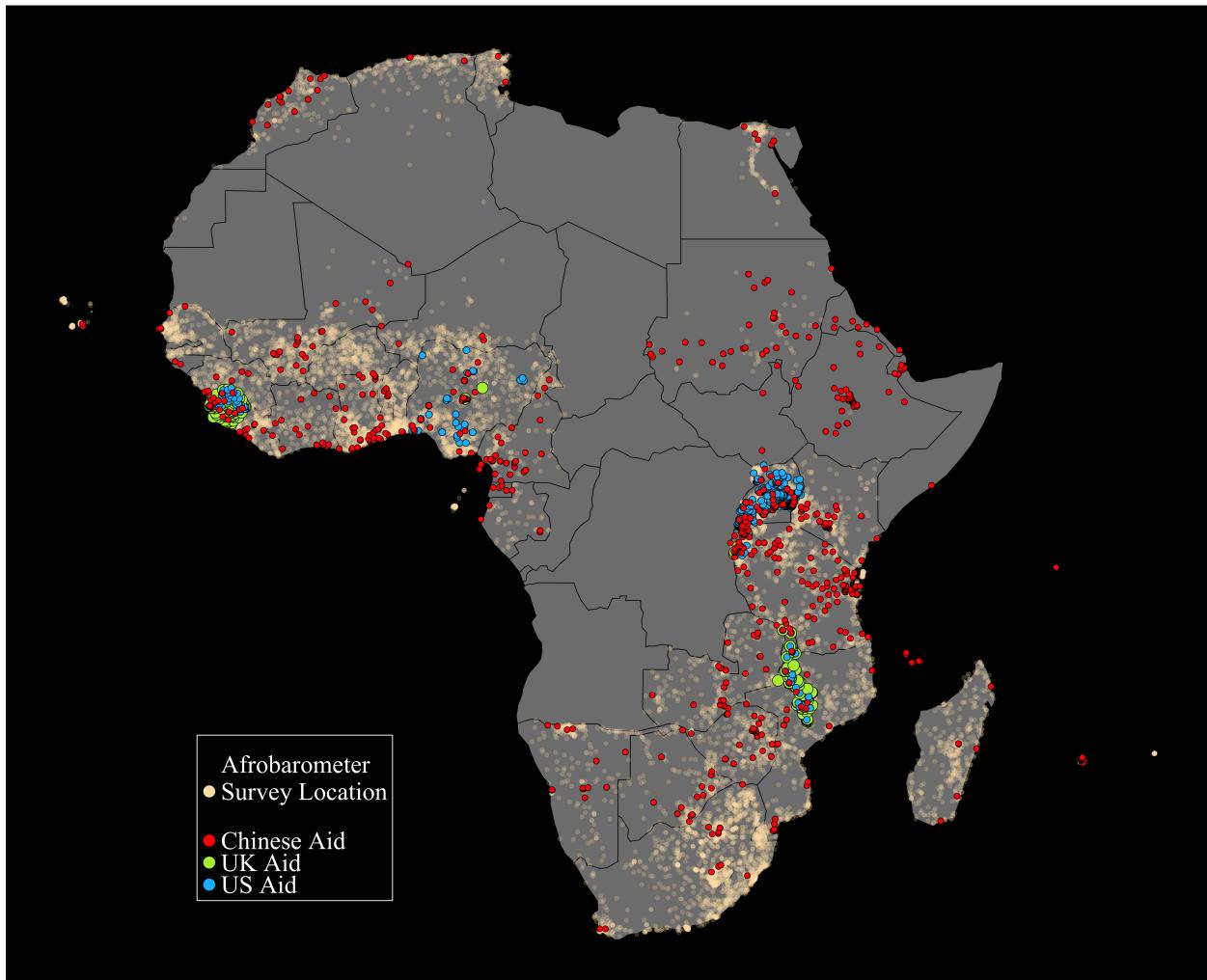


Figure A1: Map of Afrobarometer respondents and Chinese, US, and UK aid projects

ISO	N planned Chinese projects	N completed Chinese projects
ALG	0	8
BDI	0	440
BEN	332	16
BFO	28	0
BOT	756	199
CAM	0	8
CDI	106	0
CVE	492	294
EGY	46	111
ETH	0	0
GAB	88	0
GHA	865	381
GUI	16	56
KEN	1781	502
LES	412	249
LIB	72	63
MAD	50	64
MAR	34	453
MAU	0	0
MLI	635	8
MOZ	253	95
MWI	1126	611
NAM	319	472
NGR	0	0
NIG	1193	255
SAF	728	431
SEN	728	40
SRL	72	426
STP	0	0
SUD	10	194
SWZ	0	0
TOG	0	255
TUN	149	561
TZA	1130	1168
UGA	1946	112
ZAM	651	102
ZIM	190	80

Figure A2: Distribution of Chinese projects by country in full sample

ISO	N planned Chinese projects	N completed Chinese projects	N planned US projects	N completed US projects	N planned UK projects	N completed UK projects
BDI	0	424	0	616	0	112
MWI	367	470	364	2169	1225	2802
NIG	1193	255	0	0	56	40
SEN	728	40	582	0	0	0
SRL	32	362	0	331	16	670
UGA	1140	8	2319	193	0	0

Figure A3: Distribution of Chinese, US, and UK projects by country in restricted sample

Table A1: Descriptive statistics on independent variables

	N	Mean
Full Sample		
% of respondents within 30km of a planned Chinese project	136,193	0.1
% of respondents within 30km of a completed Chinese project	136,193	0.06
Restricted Sample		
% of respondents within 30km of a planned Chinese project	25,706	0.13
% of respondents within 30km of a completed Chinese project	25,706	0.06
% of respondents within 30km of a planned US project	25,706	0.13
% of respondents within 30km of a completed US project	25,706	0.13
% of respondents within 30km of a planned UK project	25,706	0.05
% of respondents within 30km of a completed UK project	25,706	0.14

Table A2: Descriptive statistics on dependent variables

	N	Mean	S.D.	Min	Max	First round available	Last round available
Perceptions of Former Colonial Powers							
Believes former colonial power is most influential	38,167	0.22	0.42	0	1	6	6
Believes former colonial power is best model	38,164	0.13	0.34	0	1	6	6
Factors Contributing to Positive Image of China							
Chinese people and culture	38,179	0.02	0.14	0	1	6	6
Chinese business investment	38,179	0.16	0.37	0	1	6	6
Chinese infrastructure investment	38,179	0.26	0.44	0	1	6	6
Chinese police of non-interference	38,179	0.04	0.2	0	1	6	6
Chinese support in international affairs	38,179	0.06	0.24	0	1	6	6
Cost of Chinese products	38,179	0.23	0.42	0	1	6	6
Factors Contributing to Negative Image of China							
Chinese cooperation w/ undemocratic leaders	38,179	0.04	0.19	0	1	6	6
Behaviors of Chinese citizens	38,179	0.05	0.23	0	1	6	6
Chinese extraction of natural resources	38,179	0.1	0.29	0	1	6	6
Chinese firms taking local jobs and businesses	38,179	0.13	0.34	0	1	6	6
Chinese land grabbing	38,179	0.07	0.25	0	1	6	6
Quality of Chinese products	38,179	0.34	0.47	0	1	6	6
Perceptions of China and US							
Belives China is Influential (Index)	31,113	1.08	0.65	0	2	6	6
Belives Chinese presence is positive (index)	28,732	1.67	0.95	0	3	6	6
Belives Chinese model is most influential	38,167	0.25	0.43	0	1	6	6
Belives US model is most influential	38,167	0.23	0.42	0	1	6	6
Belives Chinese model is best	38,164	0.24	0.43	0	1	6	6
Belives US model is best	38,164	0.3	0.46	0	1	6	6
Liberal democratic values							
Liberal values (index)	59,283	3.74	1.15	0	5	3	5
Belives multiple parties are good	70,280	0.79	0.41	0	1	3	5
Believes multiple parties create choice	92,674	0.64	0.48	0	1	2	5
Believes citizens should join any CSO	71,541	0.66	0.47	0	1	3	5
Believes democracy is best system	88,678	0.74	0.44	0	1	2	5
Believes elections are good	94,334	0.83	0.37	0	1	2	5

Table A3: Descriptive statistics on control variables

	N	Mean	S.D.	Min	Max	First round available	Last round available
Age	136,193	37.18	14.75	18	130	2	6
Muslim	136,193	0.23	0.42	0	1	2	6
Urban	136,193	0.31	0.46	0	1	2	6
Male	136,193	0.5	0.5	0	1	2	6
Distance capital (km)	136,193	340.26	297.33	0	1885.55	2	6
In leader ADM1	136,193	0.1	0.29	0	1	2	6
Avg. Annual Riots/Protests before First Planned Chinese Project within 30km	136,193	0.09	0.46	0	11.86	2	6

Table A4: Comparison of Chinese projects in full sample and our sample by sector

	N		Proportion	
	All	Sample	All	Sample
Action Relating to Debt	6	5	0.003	0.005
Agriculture, Forestry and Fishing	72	49	0.04	0.047
Banking and Financial Services	4	4	0.002	0.004
Business and Other Services	4	2	0.002	0.002
Communications	264	138	0.148	0.133
Education	161	116	0.09	0.112
Emergency Response	22	10	0.012	0.01
Energy Generation and Supply	139	50	0.078	0.048
Food Security Assistance	5	4	0.003	0.004
Government and Civil Society	174	129	0.098	0.124
Health	180	123	0.101	0.118
Industry, Mining, Construction	40	20	0.022	0.019
Other	105	53	0.059	0.051
Reproductive Health	13	12	0.007	0.012
Social Services	124	86	0.07	0.083
Support to NGOs	1	1	0.001	0.001
Trade and Tourism	24	20	0.013	0.019
Transport and Storage	358	158	0.201	0.152
Water Supply and Sanitation	79	54	0.044	0.052
Women in Development	7	4	0.004	0.004
Total	1782	1038	1	1

Table A5: Comparison of US projects in full sample and our sample by sector

	N		Proportion	
	All	Sample	All	Sample
Agriculture, Forestry and Fishing	218	109	0.209	0.252
Banking/Financial Services	14	0	0.013	0
Bio-Diversity	11	2	0.011	0.005
Education	33	4	0.032	0.009
Emergency Response	2	1	0.002	0.002
Environmental Policy	15	0	0.014	0
Food Aid	14	0	0.013	0
Government and Civil Society	150	76	0.144	0.176
Health	481	205	0.46	0.475
Industrial Development	1	0	0.001	0
Multisector Aid	12	0	0.011	0
Other	24	0	0.023	0
Reproductive Health	57	31	0.055	0.072
Social Services	10	3	0.01	0.007
Women in Development	3	1	0.003	0.002
Total	1045	432	1	1

Table A6: Comparison of completed and planned Chinese projects by sector

	N		Proportion	
	Completed	Planned	Completed	Planned
Action Relating to Debt	5	2	0.008	0.002
Agriculture, Forestry and Fishing	33	30	0.053	0.037
Banking and Financial Services	2	3	0.003	0.004
Business and Other Services	2	2	0.003	0.002
Communications	63	123	0.102	0.152
Education	90	91	0.145	0.112
Emergency Response	5	7	0.008	0.009
Energy Generation and Supply	33	28	0.053	0.035
Food Security Assistance	4	2	0.006	0.002
Government and Civil Society	90	89	0.145	0.11
Health	90	95	0.145	0.117
Industry, Mining, Construction	7	19	0.011	0.023
Other	6	50	0.01	0.062
Reproductive Health	10	6	0.016	0.007
Social Services	54	69	0.087	0.085
Support to NGOs	0	1	0	0.001
Trade and Tourism	17	15	0.027	0.019
Transport and Storage	75	138	0.121	0.171
Water Supply and Sanitation	29	37	0.047	0.046
Women in Development	4	2	0.006	0.002
Total	619	809	1	1

Table A7: Comparison of completed and planned US projects by sector

	N		Proportion	
	Completed	Planned	Completed	Planned
Agriculture, Forestry and Fishing	28	81	0.102	0.224
Bio-Diversity	2	2	0.007	0.006
Education	4	2	0.015	0.006
Emergency Response	1	0	0.004	0
Government and Civil Society	73	69	0.265	0.191
Health	133	200	0.484	0.552
Reproductive Health	31	5	0.113	0.014
Social Services	2	3	0.007	0.008
Women in Development	1	0	0.004	0
Total	275	362	1	1

Table A8: Correlation between survey- and AidData-based proxies for Chinese aid in rural Liberia

B Appendix 2: Robustness Checks

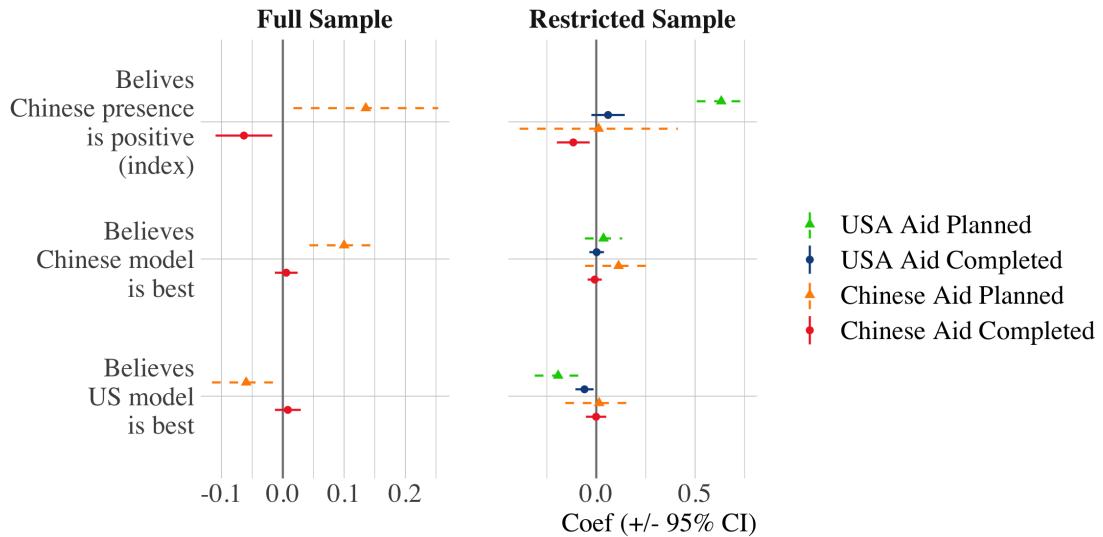


Figure A4: Effects of Chinese and US aid on perceptions of China and the US, using 2008 as cutoff year

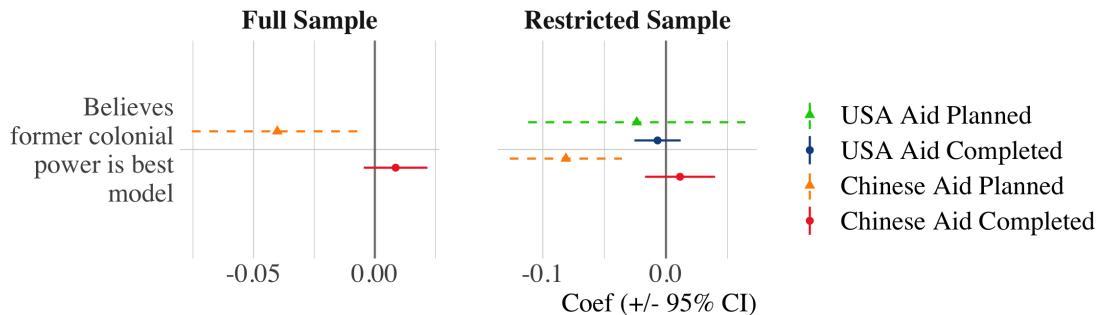


Figure A5: Effects of Chinese and US aid on perceptions of former colonial powers, using 2008 as cutoff year

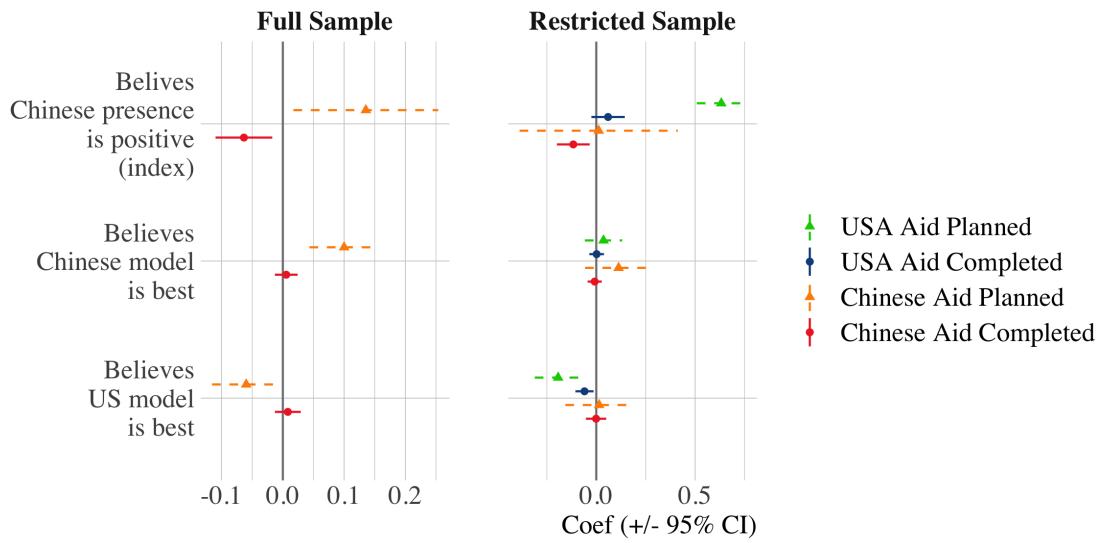


Figure A6: Effects of Chinese and US aid on perceptions of China and the US, using 2009 as cutoff year

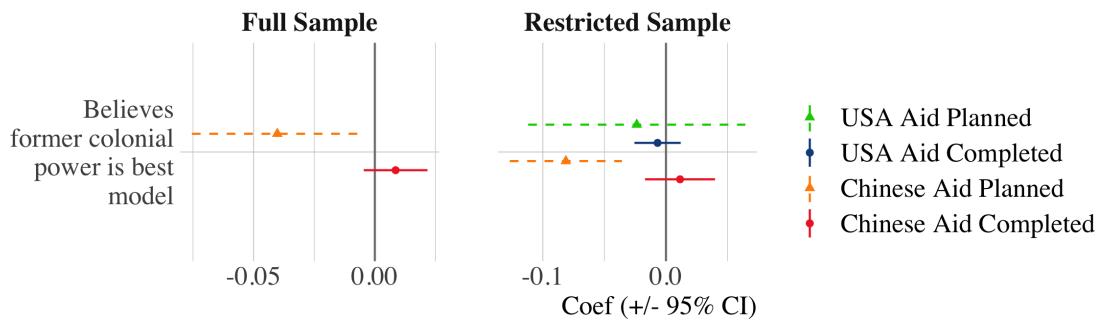


Figure A7: Effects of Chinese and US aid on perceptions of former colonial powers, using 2009 as cutoff year

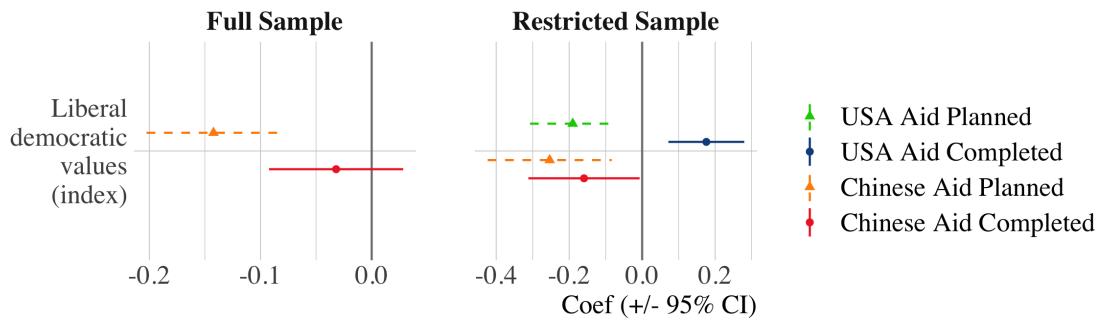


Figure A8: Effects of Chinese and US aid on liberal democratic values, using only planned projects that we know were completed

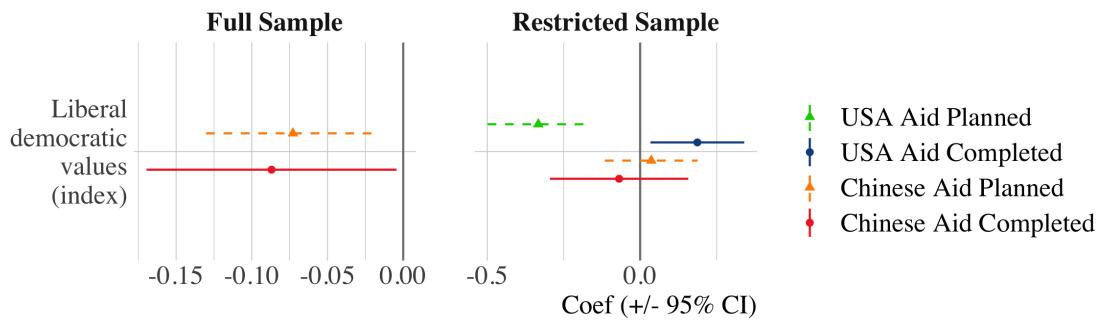


Figure A9: Effects of Chinese and US aid on liberal democratic values, using first administrative level as fixed effect

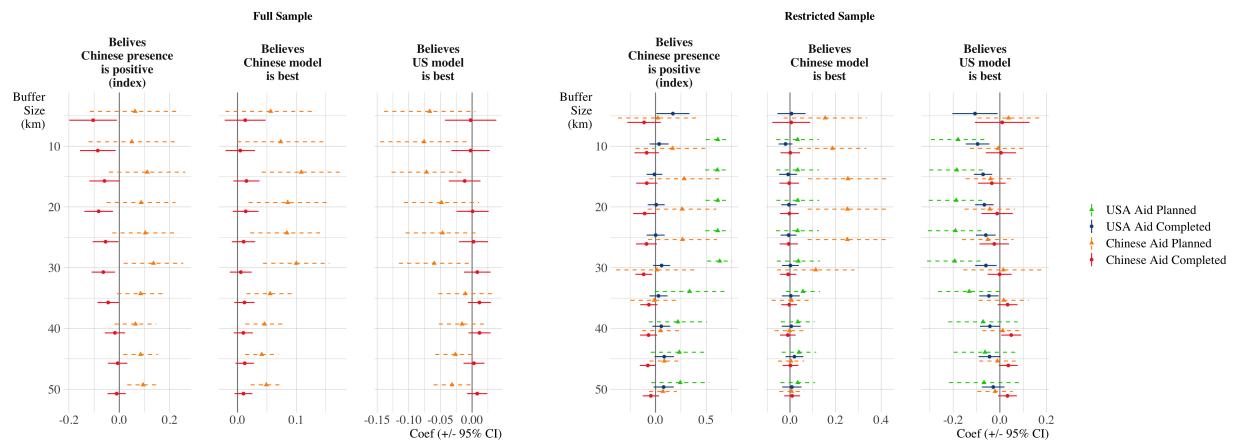


Figure A10: Effects of Chinese and US aid on perceptions of China and the US, varying buffer

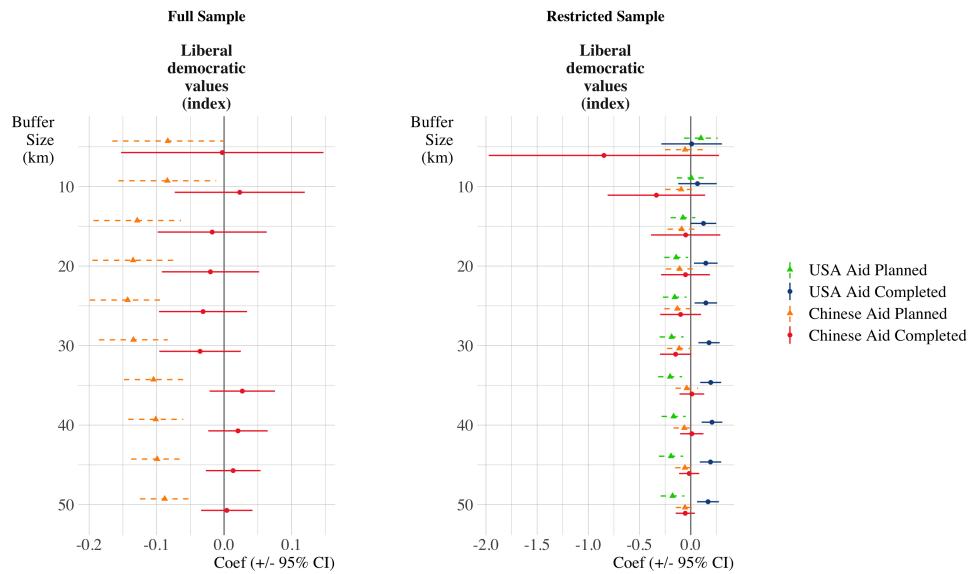


Figure A11: Effects of Chinese and US aid on liberal democratic values, varying buffer

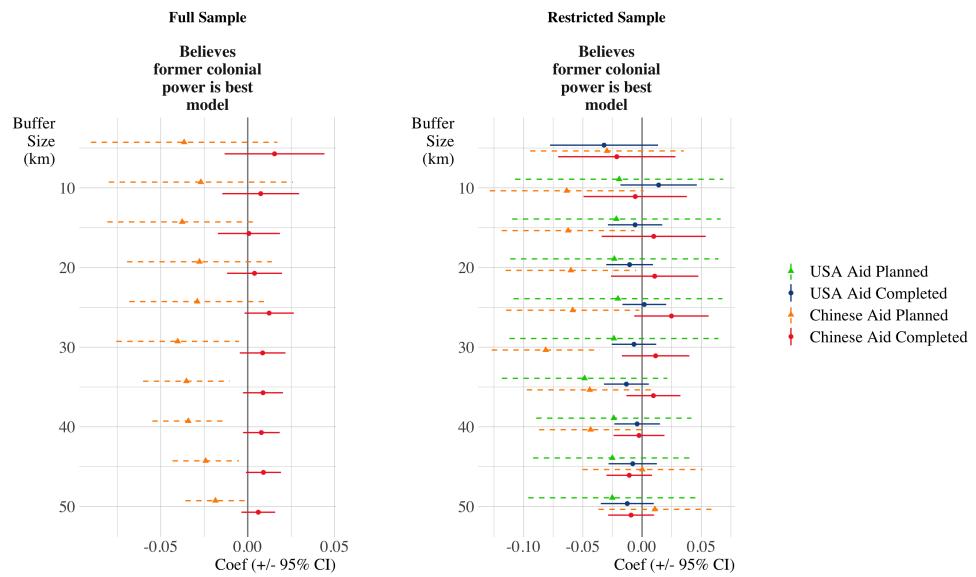


Figure A12: Effects of Chinese and US aid on perceptions of former colonial powers, varying buffer

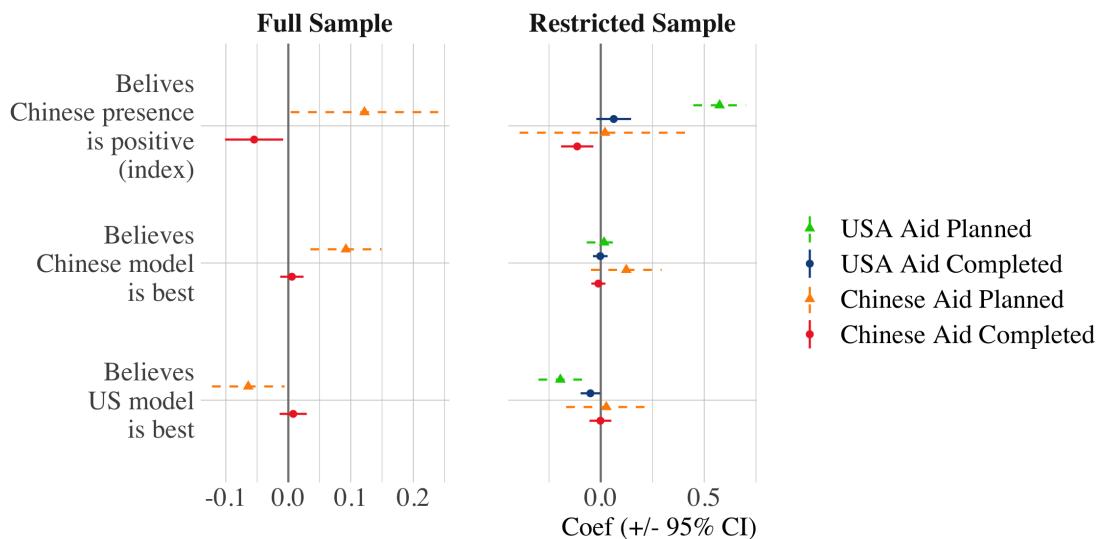


Figure A13: Effects of Chinese and US aid on perceptions of China and the US, including additional controls

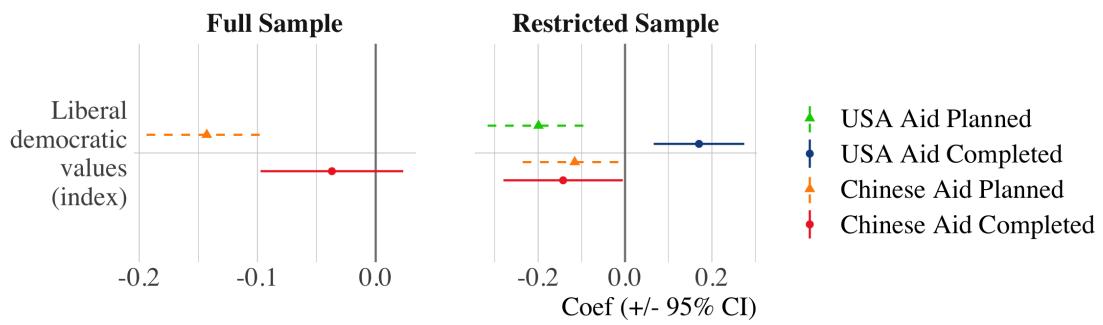


Figure A14: Effects of Chinese and US aid on liberal democratic values, including additional controls

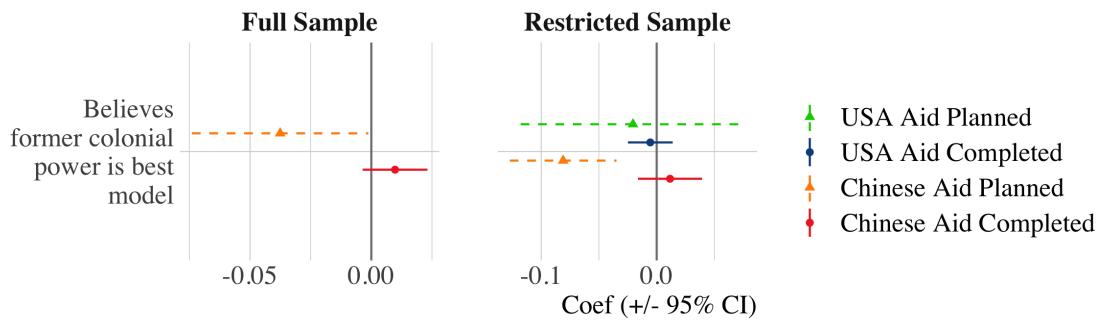


Figure A15: Effects of Chinese and US aid on perceptions of former colonial powers, including additional controls

Table A9: Effects of Chinese aid on perceptions of China and the US, including spatial lag of DV

	China Positive [Index]	China Best Model	US Best Model
	(1)	(2)	(3)
China Completed	-0.05 (0.02)**	0.004 (0.01)	0.004 (0.01)
China Planned	0.08 (0.05)	0.07 (0.03)***	-0.05 (0.03)*
Completed vs. planned <i>p</i> -value	0.024	0.012	0.058
Planned Year Cut Off	2010	2010	2010
Morans I P-Value	0.82	0.19	0.77
Spatial Lag of Dep Var Included	Y	Y	Y
Country Fixed Effects	Y	Y	Y
Buffer	30	30	30
Observations	28,732	38,164	38,164
R ²	0.15	0.05	0.07
Adjusted R ²	0.15	0.05	0.07

Note:

*p<0.1; **p<0.05; ***p<0.01

Table A10: Effects of Chinese and US aid on perceptions of China and the US, including spatial lag of DV

	China Positive [Index]	China Best Model	US Best Model
	(1)	(2)	(3)
China Completed	-0.11 (0.04)**	-0.004 (0.02)	-0.005 (0.02)
China Planned	-0.005 (0.18)	0.09 (0.07)	0.004 (0.08)
USA Completed	0.05 (0.05)	-0.01 (0.02)	-0.04 (0.02)*
USA Planned	0.50 (0.08)***	0.02 (0.06)	-0.13 (0.07)*
Completed vs. planned <i>p</i> -value [China]	0.563	0.212	0.912
Completed vs. planned <i>p</i> -value [US]	0	0.7	0.172
Planned Year Cut Off	2010	2010	2010
Morans I P-Value	0.52	0.26	0.48
Spatial Lag of Dep Var Included	Y	Y	Y
Country Fixed Effects	Y	Y	Y
Buffer	30	30	30
Observations	4,867	6,654	6,654
R ²	0.07	0.04	0.06
Adjusted R ²	0.07	0.04	0.05

Note:

*p<0.1; **p<0.05; ***p<0.01

Table A11: Effects of Chinese aid on liberal democratic values, including spatial lag of DV

Liberal Democratic Values Index	
China Completed	-0.04 (0.03)
China Planned	-0.09 (0.03)***
Completed vs. planned <i>p</i> -value	0.198
Planned Year Cut Off	N/A
Morans I P-Value	0.87
Spatial Lag of Dep Var Included	Y
Country Fixed Effects	Y
Buffer	30
Observations	59,283
R ²	0.09
Adjusted R ²	0.09

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

Table A12: Effects of Chinese and US aid on liberal democratic values, including spatial lag of DV

Liberal Democratic Values Index	
China Completed	-0.17 (0.08)**
China Planned	-0.07 (0.06)
USA Completed	0.18 (0.05)***
USA Planned	-0.11 (0.06)*
Completed vs. planned <i>p</i> -value [China]	0.311
Completed vs. planned <i>p</i> -value [US]	0
Planned Year Cut Off	N/A
Morans I P-Value	0.88
Spatial Lag of Dep Var Included	Y
Country Fixed Effects	Y
Buffer	30
Observations	11,511
R ²	0.08
Adjusted R ²	0.08

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

Table A13: Effects of Chinese aid on perceptions of former colonial powers, including spatial lag of DV

	Former Colonial Power Best Model
China Completed	0.01 (0.01)
China Planned	−0.03 (0.02)*
Completed vs. planned <i>p</i> -value	0.024
Planned Year Cut Off	2010
Morans I P-Value	0.76
Spatial Lag of Dep Var Included	<i>Y</i>
Country Fixed Effects	<i>Y</i>
Buffer	30
Observations	38,164
R ²	0.07
Adjusted R ²	0.07

Note:

p*<0.1; *p*<0.05; ****p*<0.01

Table A14: Effects of Chinese and US aid on perceptions of former colonial powers, including spatial lag of DV

	Former Colonial Power Best Model
China Completed	0.01 (0.01)
China Planned	−0.07 (0.03)***
USA Completed	−0.01 (0.01)
USA Planned	−0.02 (0.05)
Completed vs. planned <i>p</i> -value [China]	0.003
Completed vs. planned <i>p</i> -value [US]	0.871
Planned Year Cut Off	2010
Morans I P-Value	0.12
Spatial Lag of Dep Var Included	<i>Y</i>
Country Fixed Effects	<i>Y</i>
Buffer	30
Observations	6,654
R ²	0.02
Adjusted R ²	0.02

Note:

p*<0.1; *p*<0.05; ****p*<0.01

C Appendix 3: Extensions

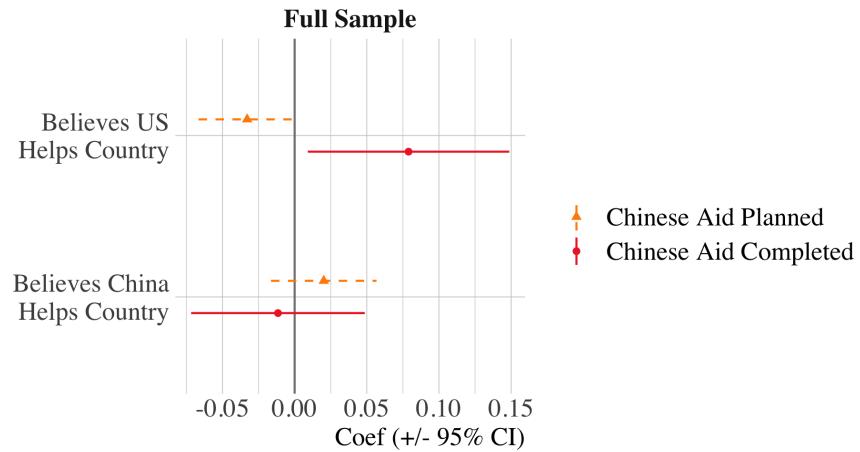


Figure A16: Effects of Chinese aid on perceptions of China and the US, using round 4 only

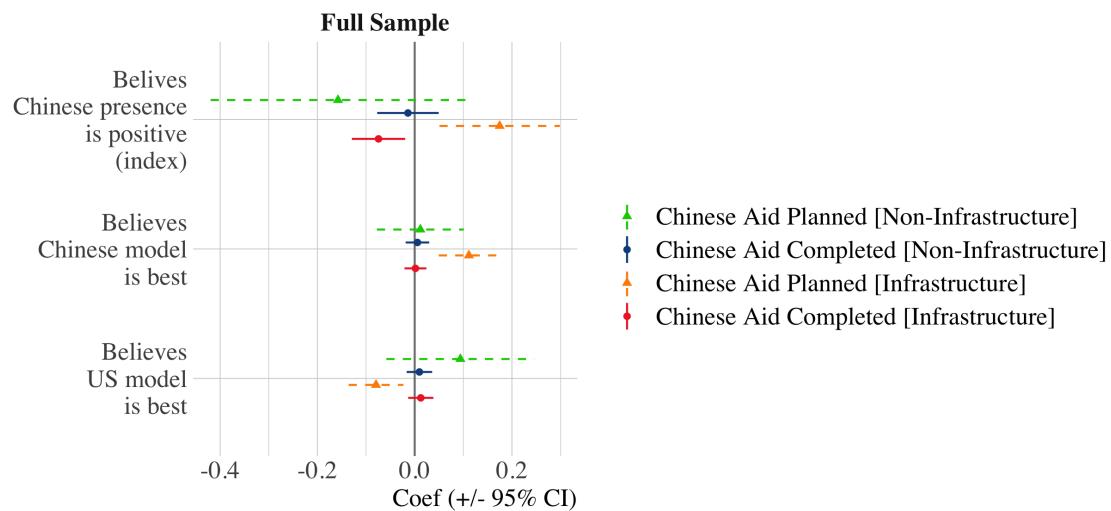


Figure A17: Effects of Chinese aid on perceptions of China and the US, disaggregating by sector

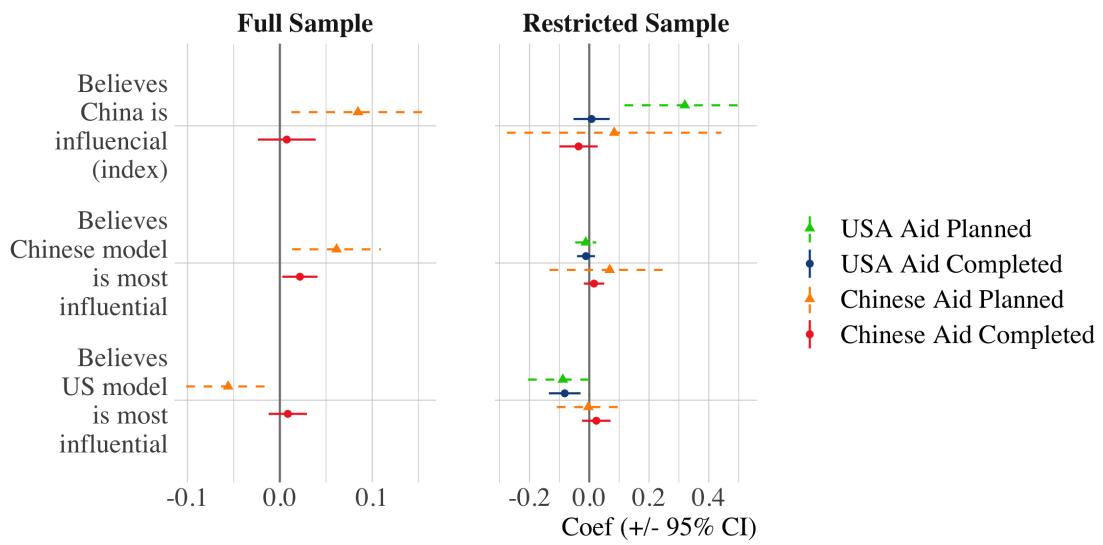


Figure A18: Effects of Chinese and US aid on perceptions of Chinese and US influence

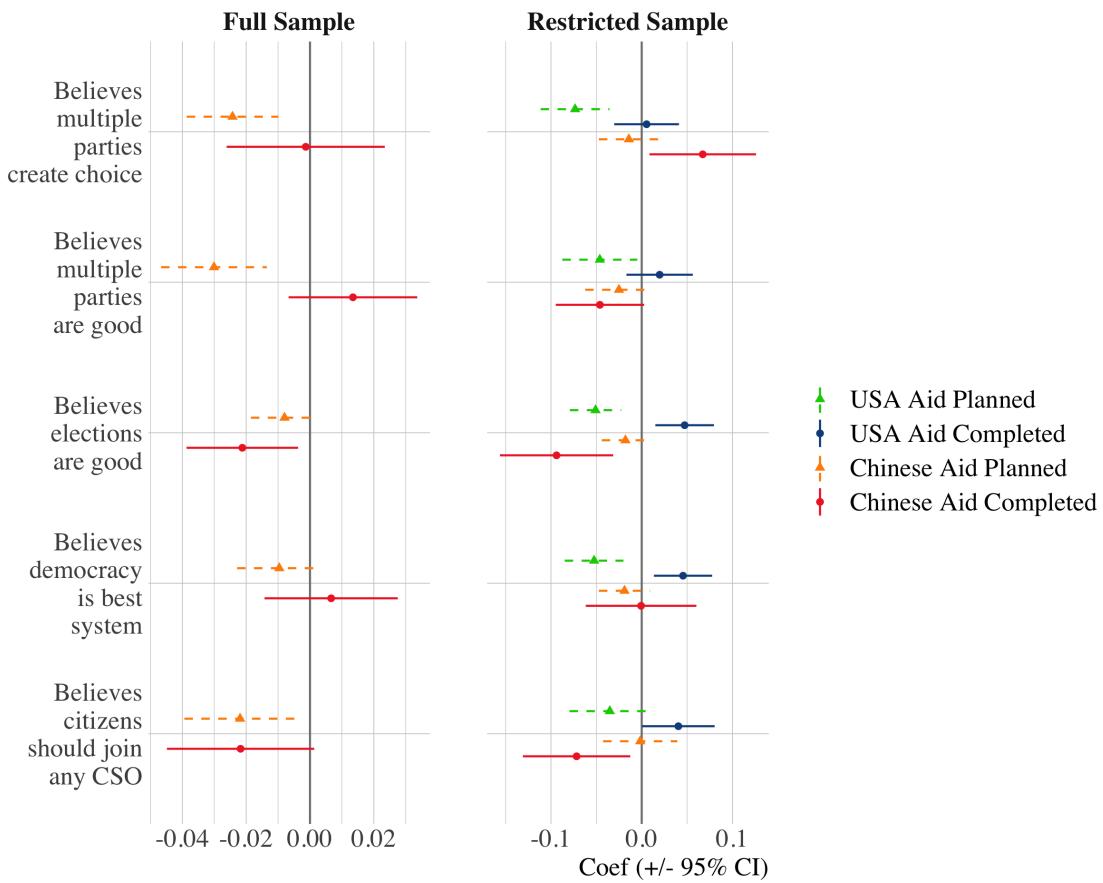


Figure A19: Effects of Chinese and US aid on disaggregated liberal democratic values

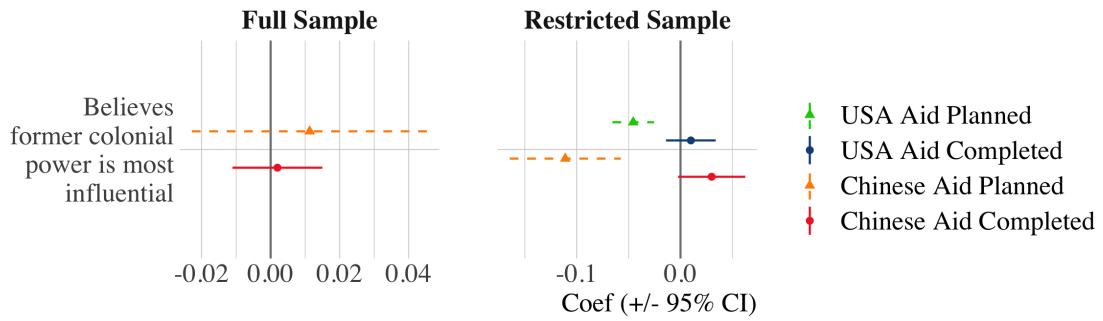


Figure A20: Effects of Chinese and US aid on perceptions of former colonial powers' influence

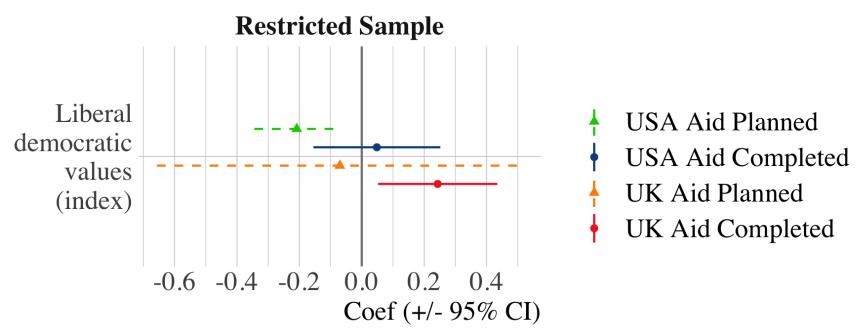


Figure A21: Effects of US and UK aid on liberal democratic values