Online Appendix for China's Energy Diplomacy: Does Chinese Foreign Policy Favor Oil Producing Countries?

This appendix presents a number of additional robustness checks. First, I include developed countries in the sample, instead of only focusing on developing countries. Second, I add additional control variables in the model, including population size (in million people), distance to China (in thousand kilometers), an indicator of whether a country is contiguous to China, an indicator of whether a country has formal diplomatic relations with Taiwan, and dummy variables for regions/continents (i.e., Africa, America, Asia, Europe, the Middle East, and Oceania). The data on distance to China and contiguity to China are from the GeoDist database provided by the CEPII (Mayer and Zignago, 2011). Lastly, following Kastner and Saunders (2012), I break down the data by administration, performing separate models for the Jiang-Zhu, Hu-Wen, and Xi-Li administrations.

The results are presented in Tables 1 and 2. In Table 1, I include developed countries in the sample in Models 1, 3, and 6. Models 2, 4, 5, and 7 in Table 1 include additional control variables and regional dummies. As can be seen in Table 1, the results remain largely unchanged. In Models 1 and 2 , the dependent variable is whether a country has formed a diplomatic partnership with China. The coefficient for oil production is positive in both models, although it loses statistical significance in Model 2. In Models 3 and 4, the dependent variable is whether a country is China's strategic partner or comprehensive strategic partner. The results show that oil production has a positive

and statistically significant effect in both models. In other words, China's partnership diplomacy, at least in terms of strategic partnerships or comprehensive strategic partnerships, is influenced by a country's oil abundance. In addition, Beijing tends to establish partnerships with FDI recipient countries, its trading partners, or countries with large population sizes.

In Model 5, the dependent variable is the total amount of Chinese aid received by an African country. As can be seen, having formal diplomatic relations with Taiwan is an important predictor. African countries that recognize Taiwan are far less likely to receive financial assistance from Beijing. However, even this crucial variable is controlled, the coefficient for oil production remains positive and statistically significant, meaning that Chinese aid to Africa is also driven by energy interests.

Lastly, in Models 6 and 7, the dependent variable is the number of leadership visits paid by Chinese top leaders from 1998 to 2013. As the results of both models show, Chinese Presidents and Premiers are more likely to travel to oil producing countries, countries that receive a higher level of FDI, and countries that have deeper trade relations with China, whether the sample includes or excludes developed countries. While economic and energy interests largely explain Chinese leadership travels, Model 7 shows that Chinese top leaders are more likely to pay leadership visits to their neighboring countries and less likely to visit countries that recognize Taiwan. So the political explanation is also valid for some Chinese foreign policy behavior.

Table 1: Energy Production and Chinese Foreign Policy Preferences: Additional Analyses

	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**	**Model 7**
Dependent variable	Partnership with China		Strategic partnership with China		Chinese aid	Leadership visits paid by Chinese leaders	
Oil production	0.127	0.096	0.139	0.452	0.181	0.068	0.057
	(0.048)***	(0.103)	(0.053)***	(0.225)**	(0.097)*	(0.021)***	(0.022)***
GDP per capita	−0.225	0.990	−0.174	0.564	−0.814	0.105	−0.152
	(0.199)	(0.644)	(0.219)	(0.651)	(0.429)*	(0.082)	(0.102)
Economic growth	−0.057	−0.301	−0.030	−0.242	0.127	−0.006	−0.011
	(0.089)	(0.257)	(0.088)	(0.251)	(0.103)	(0.034)	(0.035)
FDI inflows	0.222	0.328	0.260	0.518	0.016	0.122	0.089
	(0.070)***	(0.202)	(0.081)***	(0.203)**	(0.089)	(0.028)***	(0.027)***
Trade importance	0.760	−4.103	0.958	−1.526	2.589	0.122	0.948
	(0.524)	(2.004)**	(0.556)*	(1.792)	(3.244)	(0.052)**	(0.218)***
Level of democracy	−0.005	−0.079	−0.041	−0.117	0.133	−0.014	−0.008
	(0.046)	(0.101)	(0.051)	(0.117)	(0.074)*	(0.020)	(0.019)
Domestic conflict	0.170	−0.186	0.194	0.283	−0.137	0.023	−0.046
	(0.114)	(0.272)	(0.124)	(0.250)	(0.208)	(0.052)	(0.051)
U.S. ally	−0.276	−14.447	−0.071	−6.805	1.764	−0.129	0.284
	(0.593)	(13.138)	(0.656)	(6.218)	(2.139)	(0.242)	(0.318)
Population size		0.117		0.005	0.010		−0.001
		(0.038)***		(0.017)	(0.017)		(0.001)
Distance to China		0.238		0.884	−0.101		−0.027
		(0.304)		(0.408)**	(0.230)		(0.029)
Contiguous to China		1.686		5.306			0.836
		(2.639)		(2.359)**			(0.284)***
Recognizing Taiwan		−1.253		2.886	−9.789		−2.194
		(3.299)		(3.514)	(1.203)***		(0.895)**
# of observations	153	122	153	122	49	153	122
# of countries	153	122	153	122	49	153	122
Developed countries	Yes	No	Yes	No	No	Yes	No
Regional dummies	No	Yes	No	Yes	No	No	No
Log likelihood	−73.06	−23.41	−62.09	−21.77	−96.18	−270.39	−175.09
AIC	164.13	82.83	142.19	79.54	218.36	560.78	378.19
BIC	191.40	133.30	169.46	130.02	242.96	591.08	417.44

Notes. Standard errors are in parentheses. *p< .1; **p< .05; ***p< .01.

Table 2 presents the results when the data are disaggregated by administration. I partition the sample into three subsamples: Jiang-Zhu (1998–2002), Hu-Wen (2003–2012), and Xi-Li (2013) administrations. Due to data availability, only one year can be included in the subsample of the Xi-Li administration, and because no country was visited more than once by Xi Jinping and/or Li Keqiang in 2013, I use a logistic regression model when the dependent variable is leadership travel. In the subsample of the Jiang-Zhu administration, the time period is from 1998 (and not 1993 when Jiang Zemin took power) to 2002, and very few countries were visited more than once by Jiang Zemin and Zhu Rongji during this period, which makes a negative binomial model fail. So I also use a logistic regression model in which the dependent variable is whether a country was visited at least once by Chinese top leaders during the Jiang-Zhu administration. Only in the subsample of the Hu-Wen administration, the time period is long enough to allow for a negative binomial model with the number of leadership visits as the dependent variable.

As the results in Table 2 show, oil production consistently plays an important role in determining China's foreign policy preferences in three administrations. The exception is foreign aid. I only find a positive and statistically significant effect of oil production on Chinese aid to Africa in the Hu-Wen administration (shown by Model 5). In Models 2 and 8, oil production has a positive coefficient, although it does not achieve statistical significance, meaning that energy concerns may not be the major driver of Chinese aid to Africa during the Jiang-Zhu or Xi-Li administrations. But overall, these results echo the main findings in this paper that oil abundance is an important factor determining China's partnership diplomacy and leadership visits, whereas its influence on foreign aid is positive but less strong.

Table 2: Energy Production and Chinese Foreign Policy Preferences: Disaggregated by Administration

	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**	**Model 7**	**Model 8**	**Model 9**
Administration	Jiang-Zhu (1998–2002)			Hu-Wen (2003–2012)			Xi-Li (2013)		
Dependent variable	Partnership	Aid	Visit	Partnership	Aid	Visits	Partnership	Aid	Visit
Oil production	0.188	0.270	0.087	0.188	0.278	0.048	0.141	0.122	0.183
	(0.102)*	(0.181)	(0.051)*	(0.059)***	(0.148)*	(0.024)**	(0.053)***	(0.217)	(0.069)***
GDP per capita	−0.480	−0.761	−0.135	−0.233	−0.646	0.041	−0.259	0.707	−0.149
	(0.416)	(0.817)	(0.182)	(0.230)	(0.666)	(0.088)	(0.221)	(1.049)	(0.244)
Economic growth	−0.054	0.054	−0.013	−0.026	0.085	0.040	−0.055	0.470	0.017
	(0.125)	(0.087)	(0.041)	(0.101)	(0.175)	(0.041)	(0.070)	(0.316)	(0.080)
FDI inflows	0.175	0.081	0.040	0.236	0.164	0.093	0.291	0.089	0.010
	(0.150)	(0.123)	(0.039)	(0.097)**	(0.115)	(0.031)***	(0.171)*	(0.121)	(0.033)
Trade importance	0.685	8.270	4.557	0.735	3.728	0.146	0.610	5.815	0.112
	(0.589)	(14.527)	(1.753)***	(0.435)*	(4.973)	(0.047)***	(0.380)	(3.931)	(0.158)
Level of democracy	−0.032	0.108	0.056	0.034	0.258	−0.014	−0.014	0.016	0.024
	(0.084)	(0.148)	(0.044)	(0.049)	(0.104)**	(0.021)	(0.044)	(0.196)	(0.049)
Domestic conflict	0.031	0.479	−0.014	−0.021	0.234	−0.018	0.058	0.048	−0.023
	(0.153)	(0.276)*	(0.090)	(0.130)	(0.303)	(0.055)	(0.069)	(0.296)	(0.078)
U.S. ally	1.655	−11.084	−0.499	0.344	−1.039	0.425	0.275	1.829	−0.364
	(1.059)	(5.321)**	(0.668)	(0.628)	(3.419)	(0.268)	(0.574)	(6.110)	(0.700)
# of observations	145	48	131	152	48	136	147	44	147
# of countries	145	48	131	152	48	136	147	44	147
Developed countries	Yes	No	Yes	Yes	No	Yes	Yes	No	Yes
Log likelihood	−31.98	−132.73	−70.90	−58.06	−119.90	−183.73	−62.52	−134.91	−50.02
AIC	81.97	285.47	159.80	134.11	259.79	385.47	142.04	289.81	118.05
BIC	108.76	304.18	185.68	161.33	278.50	414.60	169.95	307.66	144.96

Notes. Standard errors are in parentheses. *p< .1; **p< .05; ***p< .01. Models 3 and 9 are logistic regression models in which the dependent variable is whether a country was visited by Chinese top leaders at least once.

References

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