## APPENDIX

# How Natural Resources Affect Corruption in China

## Procedure of Collecting and Coding Resource Data

Figure A.1: Example of Raw Data for Oil Production

Location of oilfields: Ar Horgin Banner

科尔沁油田位于内蒙古自治区赤峰市阿鲁科尔沁旗境内,处于科尔沁沙地边缘,平均海拔高度 275m,高差 5m 左右,为前倾斜起伏和缓的沙地草原。该地区特点是河谷地宽广,阶地不明显,区内 广泛分布着流沙、固定沙丘与半固定沙丘,沙丘高度在 20 ~ 50m 之间,沙丘与丘间洼地构成了地貌 组合。

时间	动田线带	油井	ŧ, п	在产油	年产水 累计	累计产油	累计产水	综合含水	年采油	采出程度	水井,口		注水量	
10110	10 <sup>4</sup> t	总井数	开井数	104	104	104	10"t	%	速度 %	%	总井数	开井数	年注水 10 <sup>4</sup> t	累计注水 104
2001	2691	425	321	11.3204	19.6296	194.9642	146.0172	70.40	0.42	7.25	127	44	40.1952	484.9291
2002	2601	427	283	10.2326	20.2020	205.1968	166.2192	68.70	0.39	7.89	139	50	37.8636	522.7927
2003	2601	439	339	11.4860	21.0865	216.6828	187.3057	65.10	0.44	8.33	144	52	35.7430	558.5357
2004	2725	467	357	14.4951	23.8096	231.1779	211.1153	66.40	0.53	8.48	146	35	25.4027	583.9384
2005	2270	466	387	13.9830	33.5692	245.1609	244.6845	74.60	0.62	10.80	152	69	34.9121	618.8505
注:茨植	注:茨榆坨采油厂编制,2010年。													

Annual oil production data

We collected oil and gas production and reserve data from China Oil and Gas Field Development Report. Around 2010, China Oil Industry Press published the Oil and Gas Field Development Report for each large oilfield. For instance, the above figure shows a screenshot of the Oil and Gas Field Development Report of Liaohe Oil and Gas Area. Khorchin oilfield (科尔沁油田) is a sub-oilfield of this area. First, based on the geographic information of oilfields, we identify the county-level unit where the oilfields are located. If an oil or gas field crosses a county border, we split the production quantity equally among the relevant counties. A particular county may house several oilfields, and we aggregate the annual production of all oilfields within that county to derive the county-level oil production. Finally, we compute the mean oil or gas production between 2000 and 2005.

Figure A.2: Example of Raw Data for Coal Reserves

屋结构为砖混结构。职工吃粮吃菜初期要到 40 公里以外的山下去运。1970 年自备汽车运 输,职工生活才有改善。1982 年每周派车送 粮送菜到采掘队和住户区。1970 年建有男、 女浴室,设有大小水池及淋浴头,均用蒸气 冲水。1990 年有医务室 3 个,专业医务人员 4 人。有电影队、电视录像,井、队有篮球场, 1979 年新建能容纳 300 人的电影院。

(二十)阿坝藏族自治州所属煤矿 阿坝州13个县中有若尔盖、阿坝、汶川、 红原、松藩5县有煤炭及泥炭分布。含煤地 层由老到新有志留系上统独峰组、三叠系上 统须家河组及上第三系,还有第四系泥炭。独 峰组含煤1层,厚0.29~6.80米,属富一高 灰、富硫无烟煤。须家河组一般含可采煤3 层,单层厚0.32~2.12米,为中一富灰、特 低硫烟煤、无烟煤。上第三系自上而下分三 组,含煤总厚32.5米,为褐煤,原煤灰分在 50%以上。第四系泥炭分布面积1600平方公 里。1990年有州属阿坝州煤矿、县属千斤沟、 八角庙、独峰和阿坝州漩口煤矿,乡镇煤矿 2个,国营煤矿职工187人,生产原煤1.6万 吨,工业总产值135.5万元。原煤产量占全 省总产量的0.05%,居各地、市、州的第二 十位。

ヤニ章 地、县属煤矿及乡镇煤矿

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名称	所在地址	煤种牌号	隶属关系	矿井可采 储 量	生产 (7	<sup>r</sup> 能力 万t)	投产年月	1990年 原煤产量	年末职工 人 数	交通运输
	The season The		A SPACE	(万 t)	设计	核定能力	18.2	(万 t)	(人)	
阿坝州煤矿	汶川县	肥煤	州属	10.00	1处	1 处	1958	0.01	54	36 3921
千斤沟煤矿	汶川县	肥煤	县属	11.00	1处	1 处	1966	0.05	46	汽车转运
八角庙煤矿	汶川县	无烟煤	县属	2.80	1处	1 处	1979	0.19	41	汽车转运
独峰煤矿	若尔美具	无烟煤	县属	31.20	1处	1处	1980	0.27	14	汽车转运
阿坝州褐煤厂	阿切具	褐煤	县属	13.40	1 处	1处	1974	0.60	32	汽车转运

表 12-3-18 1990 年阿坝州州、县属煤矿基本情况一览表

We collected coal reserve data from a series of China Coal Industry Chronicle. Since 1990, China Coal Press published the China Coal Industry Chronicles for each province. The book includes a chapter describing local coal mines owned by prefectures, counties, and towns. We summed all discoverable coal reserves of all coal mines located within a county to calculate the county's coal reserve quantity. For instance, the above shows a screenshot of the China Coal Industry Chronicle for Sichuan province in 1997. The left box shows all coal mines located in Wenchuan County, and the right box indicates the discoverable coal reserves of those coal mines. We added them together and obtained the coal reserves for Wenchuan County. While the quantity of the reserves, in general, does not change frequently, if there is any new discovery in a given year, we recalculate the average amount.

### **Appendix Tables**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		Corruption Investig	ation	Misuse of		Corruption Investig	ation	Misuse of
	All	Grassroots Officials	Senior Officials	Government Funds	All	Grassroots Officials	Senior Officials	Government Funds
		Ethnic-	minority regions			Non-ethni	c-minority regions	
Oil sales	-0.006	-0.005	-0.001	-0.003	0.008	0.010	-0.002	-0.011
$(\log)$	(0.011)	(0.010)	(0.003)	(0.018)	(0.008)	(0.008)	(0.002)	(0.011)
Conservation (	0.005	0.000	0.005	0.000	0.000	0.008	0.001	0.002
Gas sales	-0.025	-0.020	-0.005	-0.026	0.009	0.008	0.001	0.023
$(\log)$	(0.023)	(0.022)	(0.004)	(0.033)	(0.020)	(0.017)	(0.006)	(0.017)
Coal sales	0.005	0.005	-0.000	-0.008	$0.006^{*}$	$0.005^{*}$	0.001	0.008**
(reserve, log)	(0.006)	(0.005)	(0.001)	(0.008)	(0.003)	(0.003)	(0.001)	(0.004)
Controls	Y	Y	Y	Y	Y	Y	Y	Y
Prefecture FE	Υ	Υ	Υ	Y	Υ	Υ	Υ	Υ
N	694	694	694	620	2034	2034	2034	2013
$R^2$	0.552	0.557	0.287	0.593	0.488	0.496	0.437	0.600

Table A.1 Ethnic-minority and Non-ethnic-minority Regions

Notes: Ethnic-minority regions refer to ethnic minority autonomous provinces, prefectures, and counties. Robust standard errors are clustered at the county level. Corruption investigation refers to the average number of officials investigated between 2012 and 2016. Grassroots officials refer to those ranked *fuke* (vice section chief) and *zhengke* (section chief). Senior officials refer to those ranked *fuchu* (division chief) and above. Oil sales, gas sales, and coal sales are average county-level sales values between 2000 and 2005. Control variables include GDP per capita, fiscal revenue per capita, population density, urbanization rate, and fiscal transfer. All controls are average values between 2000 and 2005. \* p < 0.1; \*\* p < 0.05; \* \*\* p < 0.01.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		Corruption Investig	ation	Misuse of		Corruption Investig	ation	Misuse of
	All	Grassroots Officials	Senior Officials	Government Funds	All	Grassroots Officials	Senior Officials	Government Funds
		Coa	stal regions			Inla	and regions	
Oil sales	0.018	$0.017^{*}$	0.001	0.007	-0.001	0.001	-0.003	-0.019
$(\log)$	(0.012)	(0.010)	(0.004)	(0.011)	(0.009)	(0.008)	(0.002)	(0.015)
Gas sales	-0.037	-0.019	-0.018	-0.052	0.009	0.007	0.002	0.021
$(\log)$	(0.040)	(0.036)	(0.013)	(0.039)	(0.019)	(0.016)	(0.005)	(0.017)
Coal sales	0.004	0.004	-0.000	0.018**	0.007**	0.006**	0.001	0.001
(reserve, log)	(0.008)	(0.006)	(0.003)	(0.007)	(0.003)	(0.003)	(0.001)	(0.004)
Controls	Y	Y	Y	Y	Y	Y	Y	Y
Prefecture FE	Υ	Y	Υ	Υ	Υ	Υ	Υ	Υ
N	715	715	715	713	2013	2013	2013	1920
$R^2$	0.451	0.456	0.502	0.555	0.502	0.514	0.267	0.611

### Table A.2 Coastal and Inland Regions

Notes: Robust standard errors are clustered at the county level. Corruption investigation refers to the average number of officials investigated between 2012 and 2016. Grassroots officials refer to those ranked *fucke* (vice section chief) and *zhengke* (section chief). Senior officials refer to those ranked *fuchu* (division chief) and above. Oil sales, gas sales, and coal sales are average county-level sales values between 2000 and 2005. Control variables include GDP per capita, fiscal revenue per capita, population density, urbanization rate, and fiscal transfer. All controls are average values between 2000 and 2005. \* p < 0.1; \*\* p < 0.05; \*\*\* p < 0.01.

	(1)	(2)	(3)	(4)
	Corruption Investigation	Misuse of	Corruption Investigation	Misuse of
	All	Government Funds	All	Government Funds
	Low GDP pe	r capita	High GDP pe	er capita
Oil sales	-0.001	-0.002	$0.016^{*}$	-0.013
$(\log)$	(0.012)	(0.016)	(0.009)	(0.013)
~ .				
Gas sales	0.006	$0.038^{*}$	-0.013	-0.042*
$(\log)$	(0.026)	(0.023)	(0.029)	(0.021)
Coal sales	0.006	0.001	-0.000	0.002
(reserve, log)	(0.004)	(0.004)	(0.006)	(0.007)
N	1887	1802	841	831
$R^2$	0.536	0.649	0.562	0.685
Controls	Y	Y	Y	Y
Prefecture FE	Y	Υ	Y	Υ
N	1654	1607	1074	1026
$R^2$	0.533	0.669	0.615	0.701

Notes: Low GDP per capita indicates that GDP per capita in the county is below the national average between 2000 and 2005. High GDP per capita indicates that GDP per capita is above the national average betweem 2000 and 2005. Robust standard errors are clustered at the county level. Control variables include GDP per capita, fiscal revenue per capita, population density, urbanization rate, and fiscal transfer. All controls are average values between 2000 and 2005. \* p < 0.1; \*\* p < 0.05; \* \*\* p < 0.01.

	(1)	(2)	(3)	(4)
	Corruption Investigation	Misuse of	Corruption Investigation	Misuse of
	All	Government Funds	All	Government Funds
	Small Governm	nent Size	Large Govern	ment size
Oil sales	0.015	-0.005	-0.006	-0.012
$(\log)$	(0.011)	(0.013)	(0.007)	(0.015)
Gas sales	-0.003	-0.015	0.023	0.034
$(\log)$	(0.025)	(0.021)	(0.023)	(0.026)
Coal sales	0.006	0.003	0.008**	0.008
(reserve, log)	(0.004)	(0.005)	(0.004)	(0.006)
Controls	Y	Y	Y	Y
Prefecture FE	Y	Υ	Y	Υ
N	1654	1607	1074	1026
$R^2$	0.533	0.669	0.615	0.701

Table A.4 Government Size	(Share of Government Employees)

Notes: Small government size indicates that government employee per capita in the county is below the national average between 2000 and 2005. Large government size indicates that government employee per capita is above the national average between 2000 and 2005. Robust standard errors are clustered at the county level. Control variables include GDP per capita, fiscal revenue per capita, population density, urbanization rate, and fiscal transfer. All controls are average values between 2000 and 2005. \* p < 0.1; \*\* p < 0.05; \*\*\* p < 0.01.

Table A.5 Poisson regression: natural resources and corruption investigation

	(1) Corruption Investigation	(2) Corruption Investigation	(3) Corruption Investigation
	All	Grassroots Officials	Senior Officials
Oil sales	0.010	$0.014^{*}$	-0.022
$(\log)$	(0.008)	(0.009)	(0.022)
Gas sales	0.002	0.003	-0.000
$(\log)$	(0.018)	(0.018)	(0.043)
Coal sales	$0.007^{**}$	$0.007^{**}$	0.006
(reserve, log)	(0.003)	(0.003)	(0.008)
Prefecture FE	Y	Y	Y
Controls	Y	Y	Y
N	2728	2728	2728

Notes: Robust standard errors are clustered at the county level. Corruption investigation refers to the average number of officials investigated between 2012 and 2016. Grassroots officials refer to those ranked *fuke* (vice section chief) and *zhengke* (section chief). Senior officials refer to those ranked *fuchu* (division chief) and above. Misuse of government funds is the average misuse of funds between 2000 and 2005. Oil reserve sales, gas reserve sales, and coal reserve sales are average county-level reserve sales values between 2000 and 2005. Control variables include GDP per capita, fiscal revenue per capita, population density, urbanization rate, and fiscal transfer. All controls are average values between 2000 and 2005. \* p < 0.1; \*\* p < 0.05; \*\* \* p < 0.01.

	(1) Corruption Investigation	(2) Corruption Investigation Crassroots Officials	(3) Corruption Investigation Senior Officials	(4) Misuse of Covernment Funds
		Exclude St	nanxi	Government Funds
Oil sales	0.007	0.008	-0.001	-0.010
(log)	(0.007)	(0.006)	(0.002)	(0.010)
Gas sales	0.001	0.001	-0.000	$0.012 \\ (0.015)$
(log)	(0.017)	(0.014)	(0.005)	
Coal sales	$0.005^{*}$	$0.005^{*}$	0.000	$0.006^{*}$
(reserve, log)	(0.003)	(0.003)	(0.001)	(0.003)
Controls	Y	Y	Y	$Y \\ Y \\ 2514 \\ 0.622$
Prefecture FE	Y	Y	Y	
N	2609	2609	2609	
$R^2$	0.503	0.511	0.421	
		Exclude Inner	Mongolia	
Oil sales (log)	$0.007 \\ (0.008)$	$0.009 \\ (0.007)$	-0.002 (0.002)	-0.012 (0.010)
Gas sales (log)	$0.002 \\ (0.018)$	0.001 (0.016)	0.001 (0.005)	$0.016 \\ (0.016)$
Coal sales	$0.005^{*}$	$0.005^{*}$	0.001	$0.006^{*}$
(reserve,log)	(0.003)	(0.003)	(0.001)	(0.003)
Controls	Y	Y	Y	Y
Prefecture FE	Y	Y	Y	Y
N	2627	2627	2627	2532
$R^2$	0.493	0.501	0.419	0.617

### Table A.6 Exclusion of Outliers: Shanxi ands Inner Mongolia

Notes: Robust standard errors are clustered at the county level. Corruption investigation refers to the average number of officials investigated between 2012 and 2016. Grassroots officials refer to those ranked *fuke* (vice section chief) and *zhengke* (section chief). Senior officials refer to those ranked *fuchu* (division chief) and above. Misuse of government funds is the average misuse of funds between 2000 and 2005. Oil sales, gas sales, and coal sales are average county-level sales values between 2000 and 2005. Control variables include GDP per capita, fiscal revenue per capita, population density, urbanization rate, and fiscal transfer. All controls are average values between 2000 and 2005. \* p < 0.1; \*\* p < 0.05; \*\*\* p < 0.01.

	(1)	(2)	(3)	(4)
	Corruption Investigation	Corruption Investigation	Corruption Investigation	Misuse of
	All	Grassroots Officials	Senior Officials	Government Funds
Oil reserve sales (log)	$0.009^{*}$	$0.009^{*}$	-0.000	-0.005
	(0.005)	(0.005)	(0.001)	(0.006)
Gas reserve sales (log)	-0.040 (0.027)	-0.035 (0.024)	-0.005 (0.007)	$0.014 \\ (0.025)$
Coal reserve sales	$0.006^{**}$	$0.005^{**}$	$0.001 \\ (0.001)$	$0.006^{*}$
(log)	(0.003)	(0.002)		(0.003)
Controls Prefecture FE	Y Y 2728	Y Y 2728	Y Y 2728	Y Y 2633
$R^2$	0.495	0.503	0.416	0.617

Table A.7 Natural Resource Reserves and Corruption

Notes: Robust standard errors are clustered at the county level. Corruption investigation refers to the average number of officials investigated between 2012 and 2016. Grassroots officials refer to those ranked *fuke* (vice section chief) and *zhengke* (section chief). Senior officials refer to those ranked *fuchu* (division chief) and above. Misuse of government funds is the average misuse of funds between 2000 and 2005. Oil reserve sales, gas reserve sales, and coal reserve sales are average county-level reserve sales values between 2000 and 2005. Control variables include GDP per capita, fiscal revenue per capita, population density, urbanization rate, and fiscal transfer. All controls are average values between 2000 and 2005. \* p < 0.1; \*\* p < 0.05; \*\*\* p < 0.01.

	(1)	(2)	(3)	(4)
	DV: Per	ceived Co	rruption of	f Local Officials
Oil sales	-0.005	-0.002	-0.007	-0.002
$(\log)$	(0.008)	(0.008)	(0.015)	(0.015)
Gas sales	0.006	0.003	0.014	0.005
$(\log)$	(0.013)	(0.013)	(0.024)	(0.025)
Coal sales	$0.008^{**}$	$0.007^{*}$	$0.014^{**}$	$0.013^{*}$
(reserve, log)	(0.004)	(0.004)	(0.007)	(0.007)
Controls		Υ		Y
Province FE	Υ	Υ	Y	Υ
N	3022	2854	3022	2854
$R^2$	0.057	0.068		
pseudo $\mathbb{R}^2$			0.021	0.025

Table A.8 Alternative Corruption Perception Measure: CGSS 2015

Notes: Control variables include individuals' urban hukou, year of schooling, ccp membership, income (logged), age and gender. Columns (1) and (2) rely on OLS. Columns (3) and (4) rely on ordinal logistical regression. \* p < 0.1; \*\* p < 0.05; \*\*\* p < 0.01.

	(1)	(2) 1995-	(3) -2019	(4)	(5)	(6) 1995-	(7) 2011	(8)
All production (logged)	$-2.718^{***}$ (0.858)				$-2.522^{***}$ (0.758)			
Oil production (logged)		$\begin{array}{c} 0.430 \\ (1.326) \end{array}$				-2.718 (2.345)		
Gas production (logged)			$-2.981^{**}$ (1.058)				-1.829 (1.306)	
Coal production (logged)				$-1.776^{**}$ (0.756)				$-1.768^{**}$ (0.619)
Controls	Y	Y	Y	Y	Y	Y	Y	Y
N	25	25	25	25	17	17	17	17
$R^2$	0.887	0.852	0.888	0.877	0.904	0.875	0.886	0.899

Table A.9 National Level Resource Production and Corruption Perception

Notes: Robust standard errors are in parentheses. The outcome variable is the corruption perception index (CPI) constructed by Transparency International. A higher CPI indicates that a country has less perceived corruption. CPI data is available from 1995. Between 1995 and 2011, CPI ranges from 0 to 10. Starting from 2012, CPI ranges from 0 to 100. To make the index comparable across different years, we divided CPI by 10 after 2011 in Columns (1) to (4). The subsequent columns limit the data to 1995 to 2011. Resource data and control variables were collected from *China Statistical Yearbook*. Control variables include GDP per capita (logged), urbanization rate, fiscal revenue per capita, and population density. \* p < 0.1; \*\* p < 0.05; \*\*\* p < 0.01.

	(1)	(2)	(3)	(4)
	Corruption Investigation	Corruption Investigation	Corruption Investigation	Misuse of
	All	Grassroots Officials	Senior Officials	Government Funds
Oil sales	0.003	$0.005 \\ (0.006)$	-0.003	-0.010
(log)	(0.007)		(0.002)	(0.010)
Gas sales (log)	$0.003 \\ (0.017)$	$0.003 \\ (0.014)$	$0.000 \\ (0.005)$	$0.012 \\ (0.015)$
Coal sales	$0.005^{*}$	$0.005^{**}$	$0.000 \\ (0.001)$	$0.007^{**}$
(reserve,log)	(0.003)	(0.003)		(0.003)
GDP per capita	$0.107^{**}$ (0.048)	$\begin{array}{c} 0.094^{**} \\ (0.037) \end{array}$	$0.014 \\ (0.019)$	$0.205^{***}$ (0.058)
Fiscal revenue per capita	$egin{array}{c} 0.350 \ (0.964) \end{array}$	0.088 (0.699)	$0.261 \\ (0.399)$	$2.596^{**}$ (1.311)
Population density	-9.378	-8.816	-0.562	-7.191
	(9.413)	(7.065)	(4.910)	(14.443)
Urbanization rate	$-0.370^{***}$ $(0.101)$	$-0.373^{***}$ (0.089)	$0.004 \\ (0.033)$	$-1.362^{***}$ (0.169)
Fiscal transfer (log)	$\begin{array}{c} 0.174^{***} \ (0.028) \end{array}$	$0.151^{***}$ (0.024)	$\begin{array}{c} 0.023^{***} \ (0.008) \end{array}$	$\begin{array}{c} 0.392^{***} \\ (0.052) \end{array}$
Law enforcement	$2.134^{**}$ (0.883)	$1.720^{**}$ (0.786)	$0.414 \\ (0.271)$	$3.001^{*}$ (1.725)
Party secretary's age	$-0.184^{*}$	$-0.171^{*}$	-0.013	$0.157^{*}$
	(0.109)	(0.102)	(0.010)	(0.087)
Mayor's age	$0.047 \\ (0.064)$	$0.062 \\ (0.062)$	-0.015 (0.011)	-0.066 (0.067)
Party secretary from	$6.968^{**}$	$6.712^{**}$	$0.256 \\ (0.378)$	-10.813
same prefecture	(3.381)	(3.191)		(7.215)
Mayor from	$-1.193^{**}$	$-1.062^{*}$	-0.131	-0.193
same prefecture	(0.607)	(0.562)	(0.093)	(0.584)
Distance to prefecture (log)	-0.010	-0.005	-0.004	$-0.090^{***}$
	(0.012)	(0.011)	(0.003)	(0.017)
Prefecture FE	Y	Y	Y	Y
N	2556	2556	2556	2474
$R^2$	0.502	0.507	0.437	0.622

Table A.10	Inclusion	of Additional	Controls
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Notes: Robust standard errors are clustered at the county level. Corruption investigation refers to the average number of officials investigated between 2012 and 2016. Grassroots officials refer to those ranked *fuke* (vice section chief) and *zhengke* (section chief). Senior officials refer to those ranked *fuchu* (division chief) and above. Misuse of government funds is the average misuse of funds between 2000 and 2005. Oil sales, gas sales, and coal reserve sales are average county-level reserve sales values between 2000 and 2005. Law enforcement is the average proportion of public security expenditure in total fiscal expenditure at a county government between 2000 and 2005. Party secretary's or mayor's age refers to the prefecture party secretaries' and mayors' average age between 2000 and 2005. Party secretary or mayor from the same prefecture indicates the average proportion of prefecture party secretaries or mayors working in prefectures they were born between 2000 and 2005. Distance to prefecture is the distance between a county's administrative center to the prefecture administrative center. All controls are average values between 2000 and 2005. \* p < 0.1; \*\* p < 0.05; \*\*\* p < 0.01.

Variable	Period	Data Source
Oil Production	2000-2005	China Oil and Gas Field Development Report
Gas Production	2000-2005	China Oil and Gas Field Development Report
Coal Reserve		China Coal Industry Chronicle
GDP Per Capita	2000-2005	China Local Finance Statistic Yearbook
Fiscal Expenditure	2000-2005	China Local Finance Statistic Yearbook
Fiscal Transfer	2000-2005	China Local Finance Statistic Yearbook
Urbanization Rate	2000-2006	China County Statistical Yearbook
Law enforcement	2000-2005	China Local Finance Statistic Yearbook
Party secretary's age	2000-2005	Chinese Political Elite Database (CPED))
Mayor's age	2000-2005	Chinese Political Elite Database (CPED)
Party secretary from same prefecture	2000-2005	Chinese Political Elite Database (CPED)
Mayor from same prefecture	2000-2005	Chinese Political Elite Database (CPED)
Corruption Investigation	2012-2016	Tencent (from Wang and Dickson $(2022)$ )
Misuse of Government Funds	2000-2005	China Audit Yearbook

Table A.11 Data Sources



Figure A.3: Example of Interdependence between Local Government and the Coal Mine Industry

Based on the case in Shanxi province, we plot a figure to illustrate the interdependence between the local government and the coal mine industry. Specifically, we rely on news reports on corruption in Lüliang to draw the figure.<sup>23</sup> Local leaders and officials are given authority to wield substantial control over mining permits and hold decisive authority over safety regulations in coal mines. In order to secure and continue political protection and obtain mining licenses, local coal mine owners resort to bribing these officials and leaders. The local leaders depend on these illicit exchanges with businessmen to bribe senior officials and secure higher-ranking positions within the government. Furthermore, coal mine owners may even directly engage in politics by becoming members of the local People's Political Consultative Conference (PPCC) or legislative members within the People's Congress, which help acquire protection and establish political networks. They may also facilitate the appointment of their family members as government officials to exert influence over local leaders.

 $<sup>^{23}</sup>$ The case has been reported indetail inmany news outlets includ-( https://www.nytimes.com/2014/12/28/world/asia/ the NewYork Timesing china-anti-corruption-campaign-takes-toll-on-luliang-shanxi.html) and Chinese media such as the *Caixin* (https://china.caixin.com/2014-10-21/100740817.html).

Prefecture	County/District	Name	Position	Year of Investigation
Chifeng	Ar Horqin	Zhou Chunyi	Party secretary	2014
Erdos	Dongsheng	Zhang Jiping	Party secretary	2014
Erdos	Dongsheng	Lin Jin	Mayor	2015
Erdos	Dongsheng	Zhang Ping	Party secretary	2015
Xilin Gol	$\operatorname{Erlianhot}$	Bao Chongming	Party secretary	2015
Ulangab	Siziwang	Xiao Wanshou	Party secretary	2015
Erdos	$\operatorname{Otog}$	Liu Guihua	Party secretary	2020
Hulunbuir	Hailar	Yang Guohong	Party secretary	2021
Ulanqab	Qahar Right Middle Banner	Liu Chao	Party secretary	2021
Ulanqab	Qahar Right Middle Banner	Zhang Haiming	Mayor	2020
Ulanqab	Huade	Huo Jianzhong	Party secretary	2019
Xilin Gol	Sonid Left Banner	Xing Wenfeng	Party secretary	2021
Hohhot	Saihan	Yun Zhonghou	Party secretary	2020
Tongliao	Horqin Left Middle banner	Liu Baitian	Party secretary	2021

Table A.12 County Leaders Investigated Between 2012 and 2021 in Inner Mongolia