1.We have labeled all the cities mentioned on the new administrative map, and Table S1 containing the names of all analyzed counties, along with their general characteristics (area, population, GDP, urbanization rate) in 2019.



Figure S1 Administrative maps of northern Shaanxi, Guanzhong, and southern Shaanxi.

Table S1. County characteristics data (2019).

County	Area (km²)	Population（ten thousand people）	GDP (billion yuan)	Urabanization rate (%)
Xincheng	29.9210	64.72	605.93	100.00
Beilin	22.9874	68.77	1013.97	100.00
Lianhu	38.4051	78.33	789.05	100.00
Baqiao	325.0685	70.39	489.19	95.23
Weiyang	263.2573	82.73	1255.07	97.43
Yanta	152.3322	138.53	2271.01	100.00
Yanliang	242.2087	30.45	255.06	57.90
Lintong	918.4965	70.04	242.69	35.39
Changan	1591.9635	106.42	1001.21	61.46
Gaoling	287.4451	36.71	374.44	65.08
Huyi	1281.0395	56.46	180.23	42.88
Lantian	2005.8787	53.61	149.23	34.02
Zhouzhi	2944.7554	59.29	137.15	34.51
Wangyi	154.5820	16.97	84.8212	90.00
Yintai	607.4690	18.40	61.7544	68.90
Yaozhou	1611.1365	22.92	103.53	60.50
Yijun	1512.7168	8.96	33.1865	35.90
Weibin	844.1242	45.45	521.14	88.00
Jintai	309.8035	39.83	364.95	85.49
Chencang	2469.5184	60.25	214.41	49.68
Fengxiang	1232.5904	48.75	223.66	45.09
Qishan	854.7067	46.48	179.34	48.77
Fufeng	703.1555	42.15	147.14	35.35
Meixian	857.7693	30.36	161.21	39.42
Longxian	2279.2655	25.20	91.55	39.66
Qianyang	996.9704	12.54	67.69	42.08
Linyou	1711.0388	9.23	140.61	39.17
Fengxian	3150.3826	10.71	77.66	60.71
Taibai	2717.3822	5.15	34.44	45.24
Qindu	259.6648	34.90	343.85	93.66
Yangling	133.4985	21.08	166.77	66.07
Weicheng	267.6261	21.37	256.59	100.00
Sanyuan	577.5187	41.19	215.30	54.76
Jingyang	777.7050	31.58	75.73	30.09
Qianxian	999.2557	53.57	171.62	45.63
Lishou	1012.0054	45.38	153.48	39.36

Yongshou	887.3659	19.01	84.36	39.63
Changwu	568.4672	17.68	102.55	40.82
Xunyi	1769.4410	26.87	88.39	39.59
Chunhua	983.6455	19.81	77.52	39.43
Wugong	392.6819	41.48	153.16	39.39
Xingping	507.6742	50.63	241.64	63.04
Binzhou	1181.6147	32.17	231.10	53.66
Linwei	1261.3348	91.48	308.80	56.42
Huazhou	1129.1152	31.38	99.34	51.91
Tongguan	428.9283	15.12	44.20	47.50
Dali	1694.5592	68.91	168.56	43.87
Heyang	1286.4147	43.91	104.98	47.31
Chengcheng	1122.1725	37.31	98.49	47.36
Pucheng	1583.0424	73.62	194.16	45.59
Baishui	983.3311	27.59	84.53	49.05
Fuping	1247.0061	74.27	183.96	45.19
Hancheng	1569.2976	39.46	351.86	69.89
Huayin	676.3680	24.78	70.79	56.41
Baota	3536.0226	49.71	363.91	80.58
Ansai	2960.2501	17.76	114.63	61.01
Yanchang	2363.6503	12.79	52.87	51.34
Yanchuan	1982.7963	17.01	99.44	71.75
Zhidan	3788.6292	14.58	161.55	62.65
Wuqi	3787.9698	15.26	178.73	63.67
Ganquan	2267.7153	7.91	29.08	60.34
Fuxian	4188.5214	15.68	66.37	48.45
Luochuan	1790.1375	22.82	243.87	46.34
Yichuan	2939.3147	12.15	37.78	57.91
Huanglong	2750.9471	4.92	18.67	55.74
Huangling	2287.9666	13.04	185.93	63.78
Zichang	2396.1289	21.94	111.04	68.25
Hantai	544.2536	54.04	376.06	74.41
Nanzheng	2807.7675	47.74	218.41	48.81
Chenggu	2217.9317	47.21	232.43	49.28
Yangxian	3193.4911	38.71	163.16	44.90
Xixiang	3229.4480	34.47	116.70	46.53
Mianxian	2389.9383	38.41	147.03	52.15
Ningqiang	3256.5800	30.89	100.01	46.50
Lueyang	2825.5941	20.01	71.17	48.70
Zhenba	3407.0080	24.87	92.45	43.02
Liuba	1949.4629	4.34	18.69	47.52

Foping	1270.7262	3.02	11.48	49.50
Yuyang	6800.6526	68.87	937.14	74.66
Hengshan	4310.2178	31.64	202.43	54.31
Fugu	3205.9198	27.28	564.77	66.97
Jingbian	4938.8602	38.41	389.85	64.41
Dingbian	6825.1237	34.21	317.62	50.32
Suide	1852.7590	28.63	90.55	44.41
Mizhi	1166.7367	14.42	65.57	45.93
Jiaxian	2041.2806	15.08	57.59	41.82
Wubao	419.3560	6.49	26.91	45.68
Qingjian	1854.4466	12.56	61.41	42.90
Zizhou	2027.5651	16.05	59.96	41.89
Shenmu	7444.3160	48.78	1362.88	70.39
Hanbin	3645.9406	88.64	380.95	58.10
Hanyin	1364.2877	25.01	112.50	45.20
Shiquan	1516.3433	17.42	94.14	46.50
Ningshan	3662.0013	7.05	31.72	48.50
Ziyang	2240.4616	28.70	109.59	44.70
Langao	1957.6403	15.68	58.02	45.50
Pingli	2649.2052	19.63	103.90	48.80
Zhenping	1501.8072	5.18	24.34	43.50
Xunyang	3539.9103	43.57	79.84	48.80
Baihe	1454.2289	16.61	187.05	45.90
Shangzhou	2645.9136	54.03	156.75	49.45
Luonan	2832.0850	44.92	148.56	49.24
Danfeng	2408.1650	29.93	98.02	49.25
Shangnan	2312.4404	22.55	91.42	49.53
Shangyang	3531.2392	42.79	152.88	49.31
Zhenan	3486.5200	27.98	105.87	49.46
Zhashui	2367.8885	15.71	83.73	49.46

2. The factors used for assessing the driving forces of the coupling coordinator relationship should be described more in detail. The data source, the year from which the data comes, the spatial accuracy of the data and the basic descriptive statistics for counties are shown in Table S2.

Table S2. Driving forces data.

Data type	Data source	Data description	Resolution and unit
Per capita GDP	Shaanxi Statistical Yearbook	Statistical data for the years 2010,	yuan

		2015 and 2019.	
Urban residents' disposable income	Shaanxi Statistical Yearbook	Statistical data for the years 2010, 2015 and 2019.	yuan
Local fiscal revenue	Shaanxi Statistical Yearbook	Statistical data for the years 2010, 2015 and 2019.	yuan
Urbanization rate	Shaanxi Statistical Yearbook	Statistical data for the years 2010, 2015 and 2019.	%
Secondary industry	Shaanxi Statistical Yearbook	Statistical data for the years 2010, 2015 and 2019.	Billion yuan
Tertiary industry	Shaanxi Statistical Yearbook	Statistical data for the years 2010, 2015 and 2019.	Billion yuan
Temperature	National Earth System Science Data Center, National Science & Technology Infrastructure of China (http://www. geodata.cn)	Average temperature for the year	℃
Precipitation	National Earth System Science Data Center, National Science & Technology Infrastructure of China (http://www. geodata.cn)	Average precipitation for the year	mm
Topography	Resource and Environment Science and Data Center (http://www. resdc.cn/)	Elevation of the area	m