

1 Appendices

2 Appendix I Hausman test results

3
4 *Hausman test results are as follows*

5 b = consistent under H_0 and H_a ; obtained from xtreg

6 B = inconsistent under H_a , efficient under H_0 ; obtained from xtreg

7
8 Test: H_0 : difference in coefficients not systematic

9 $\chi^2(9) = (b-B)'[(V_b-V_B)^{-1}](b-B)$

10 = 614.06

11 Prob> χ^2 = 0.0000

12 (V_b-V_B is not positive definite)

13 From the above results, the P value is 0.0000, which is far less than 0.05, rejecting the basic
14 assumption that the individual effect is irrelevant to the explanatory variable. So this paper
15 choose the fixed effect model.

Appendix II OLS estimated results

Dependent Variable: Y?

Method: Pooled Least Squares

Sample: 1994 2015

Included observations: 22

Cross-sections included: 12

Total pool (balanced) observations: 264

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.250921	0.198724	26.42315	0.0000
LNFE?	-0.043229	0.072097	-0.599596	0.5493
LNTCF?	0.332400	0.115536	2.877037	0.0044
LNFAI?	0.209551	0.132466	1.581921	0.1149
HC?	6.750523	0.528844	12.76467	0.0000
FDI?	7.72E-06	3.06E-06	2.524983	0.0122
RLL?	0.254121	0.107087	2.373044	0.0184
OHS?	-0.025823	0.001389	-18.58682	0.0000
MI?	3.17E-06	2.48E-06	1.277830	0.2025
PA?	4.93E-06	5.78E-06	0.852832	0.3946
Krugman?	2.326191	0.406271	5.725718	0.0000
PD?	7.62E-05	0.000148	0.515895	0.6064
DWEST?	0.215144	0.055516	3.875373	0.0001
R-squared	0.932782	Mean dependent variance		9.209280
Adjusted R-squared	0.929569	S.D. dependent variance-		0.916623
S.E. of regression	0.243261	Akaike info criterion		0.058626
Sum squared residuals	14.85317	Schwarz criterion		0.234715
Log likelihood	5.261345	Hannan-Quinn criterion		0.129384
F-statistic	290.2622	Durbin-Watson statistic		0.560085
Prob(F-statistic)	0.000000			

The autocorrelation of the residuals can be determined according to the following criteria:

(1) If $0 < DW < LD$, then the test can reject 0 hypothesis, the residual exists first order positive autocorrelation. The closer the DW is to 0, the stronger the autocorrelation is.

(2) If $LD < DW < UD$, it is impossible to determine whether there is autocorrelation.

(3) If $UD < DW < 4-UD$, then the test accepts 0 hypothesis, the residual does not exist first order positive autocorrelation. The closer the DW is to 2, the greater is the judgment of no autocorrelation.

(4) If $4-UD < DW < 4-LD$, it is not possible to determine whether there is autocorrelation.

(5) If $4-LD < DW < 4$, then the test rejects 0 hypothesis, the residual exists first order negative autocorrelation. The closer the DW is to 4, the stronger the negative autocorrelation.

The critical value table of Durbin-watson statistic indicates that the upper and lower critical value of Durbin-watson statistic distribution increases with the increase of sample size,

the sample size is 264, the look-up table has no specific corresponding value(<https://wenku.baidu.com/view/9a63efe59b89680203d825f9.html>), but $DL_{264} > DL_{260}$, the DW statistic value from the above table is $0.56 < 1.709 = DL_{260} < DL_{264}$. So the H_0 hypothesis should be rejected, and the residuals exist first-order positive autocorrelation.

Heteroscedasticity test:

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

H_0 : Constant variance

Variables: fitted values of Y

$\chi^2(1) = 11.15$

$\text{Prob} > \chi^2 = 0.0008$

P value is 0.0008, which is less than 0.05 and does not pass the original assumption of the same variance, so heteroscedasticity exists.

Appendix III Space weight matrix W

Table 1 Space weight matrix W

Province	1	2	3	4	5	6	7	8	9	10	11	12	Total
1	0	0	0	1	0	0	0	1	1	0	0	0	3
2	0	0	0	0	1	1	1	1	1	1	0	0	6
3	0	0	0	1	0	0	0	0	0	0	0	1	2
4	1	0	1	0	0	0	0	1	0	0	0	1	4
5	0	1	0	0	0	1	0	0	1	0	0	0	3
6	0	1	0	0	1	0	0	0	1	0	0	0	3
7	0	1	0	0	0	0	0	1	0	1	1	0	4
8	1	1	0	1	0	0	1	0	1	0	1	1	7
9	1	1	0	0	1	1	0	1	0	0	0	0	5
10	0	1	0	0	0	0	1	0	0	0	1	0	3
11	0	0	0	0	0	0	1	1	0	1	0	1	4
12	0	0	1	1	0	0	0	1	0	0	1	0	4
Total	3	6	2	4	3	3	4	7	5	3	4	4	48

Note: The code of the line is i , the code of the column is j , and $W_{i,j}$ refers to the number in column j of line i .

Appendix IV Natural logarithm of GDP per capita

Table 2 Natural logarithm of GDP per capita (Y)

Year	IM	GX	CQ	SC	GZ	YN	TB	SX	GS	QH	NX	XJ
1994	8.04	7.89	7.98	7.76	7.33	7.83	7.58	7.79	7.56	7.99	7.92	8.27
1995	8.24	8.10	8.28	8.02	7.51	8.03	7.77	7.99	7.75	8.16	8.15	8.46
1996	8.40	8.22	8.43	8.17	7.62	8.24	7.90	8.14	7.99	8.24	8.28	8.54
1997	8.51	8.28	8.57	8.30	7.72	8.32	8.05	8.25	8.07	8.32	8.36	8.67
1998	8.60	8.38	8.63	8.36	7.77	8.40	8.21	8.31	8.17	8.40	8.44	8.73
1999	8.68	8.40	8.67	8.42	7.84	8.42	8.34	8.39	8.24	8.46	8.50	8.77
2000	8.78	8.45	8.63	8.51	7.92	8.47	8.43	8.51	8.33	8.54	8.59	8.91
2001	8.88	8.53	8.74	8.59	8.01	8.52	8.58	8.61	8.39	8.66	8.71	8.98
2002	9.01	8.62	8.86	8.68	8.09	8.59	8.72	8.72	8.47	8.78	8.80	9.04
2003	9.21	8.73	9.00	8.80	8.22	8.68	8.84	8.86	8.60	8.90	8.95	9.19
2004	9.45	8.92	9.17	8.97	8.37	8.86	9.00	9.06	8.79	9.07	9.13	9.34
2005	9.70	9.08	9.30	9.11	8.53	8.97	9.12	9.20	8.92	9.21	9.23	9.48
2006	9.91	9.23	9.43	9.26	8.66	9.10	9.25	9.37	9.08	9.37	9.37	9.61
2007	10.19	9.42	9.72	9.47	8.97	9.27	9.40	9.65	9.27	9.58	9.63	9.74
2008	10.46	9.59	9.93	9.65	9.20	9.44	9.52	9.89	9.43	9.82	9.88	9.89
2009	10.59	9.68	10.04	9.76	9.30	9.51	9.62	10.00	9.49	9.88	9.99	9.90
2010	10.77	9.91	10.23	9.96	9.48	9.66	9.74	10.21	9.69	10.09	10.20	10.13
2011	10.97	10.14	10.45	10.17	9.71	9.87	9.91	10.42	9.88	10.29	10.41	10.31
2012	11.06	10.24	10.57	10.30	9.89	10.01	10.04	10.56	10.00	10.41	10.50	10.43
2013	11.12	10.33	10.67	10.39	10.05	10.14	10.18	10.67	10.11	10.52	10.59	10.53
2014	11.17	10.41	10.78	10.47	10.18	10.21	10.28	10.76	10.18	10.59	10.64	10.61
2015	11.17	10.47	10.87	10.51	10.30	10.27	10.37	10.77	10.17	10.63	10.69	10.60

Note: IM="Inner Mongolia"; GX="Guangxi"; CQ="Chongqing"; SC="Sichuan"; GZ="Guizhou"; YN="Yunnan";

TB="Tibet"; SX="Shannxi"; GS="Gansu"; QH="Qinghai"; NX="Ningxia"; XJ="Xinjiang"

Appendix V Total capital formation

Table 3 Total capital formation (TCF)

Year	IM	GX	CQ	SC	GZ	YN	TB	SX	GS	QH	NX	XJ
1994	331.11	472.33	263.89	713.66	154.55	433.59	23.07	398.55	177.63	60.1	69.12	487.55
1995	372.98	618.75	352.94	927.71	233.94	492.77	32.56	480.48	222.57	77.67	82.45	560.88
1996	445.76	596.99	415.68	1108.46	269.98	613.55	27.28	539.53	279.49	90.74	96.86	480.57
1997	473.3	578.61	536.51	1253.44	315.74	703.39	31.4	546.18	324.61	114.19	103.91	564.92
1998	525.1	650.6	599.1	1425.8	369	770.1	35.8	641.8	369.5	129.5	127.5	685.8
1999	554.22	645.64	592.58	1466.29	431.38	744.31	43.75	678.65	411.47	140.29	142.39	581.59
2000	642.07	676.12	700.89	1521.43	489.19	746.15	45.51	856.6	453.44	160.46	174.47	618.12
2001	679.54	769.04	832.21	1693.1	629.24	957.96	49.72	980.6	523.05	207.39	221.96	771.42
2002	862.2	877.93	1005.73	1925.31	682.22	920.5	72.19	1117.4	586.44	254.09	265.4	864.27
2003	1339.07	1030.4	1329.9	2248.78	789.8	1188.55	104.58	1317.2	672.98	291.2	324.03	1119.22
2004	1945.29	1356.35	1664.55	2728.1	894.34	1450.44	173.97	1596.21	817.23	323.65	412.13	1350.47
2005	2845.06	1798.25	1960.25	3326.22	1028.22	1798.86	184.14	2026.38	916.96	369.28	505.73	1505.96
2006	3466.11	2200.39	2227.31	4203.05	1180.3	2025.26	241.22	2569.52	1090.73	427.63	588.83	1654.7
2007	4494.4	2994.88	2679.64	5242.55	1442.35	2113.54	272.5	3466.61	1322.52	496.71	688.58	1970.07
2008	5721.74	4093.19	3239.5	6574.63	1782.31	3017.36	313.81	4598.06	1621.28	643.19	968.45	2301.5
2009	7495.42	5795.76	3818.61	7720.13	2100.53	3756.61	380.6	5447.19	1915.97	798.24	1308.83	2549.75

2010	9020.4	7934.8	4576.55	9219.92	2575.27	5578.57	565.5	6834.25	2343.52	1086.99	1563.26	3371.22
2011	11014.63	10036.05	5757.51	11067.68	3229.3	7138.91	542.57	8487.32	2872.27	1399.66	1754.58	4162.32
2012	13442.07	11068.47	6341.36	12496	4164.37	8576.36	708.65	9915.23	3298.05	1719.25	2086.85	5792.16
2013	15728.14	10129.47	6915.6	13494.59	5261.41	9955.27	899.07	11038.44	3775.85	2519.08	2334.2	7192.45
2014	13755.2	10789.81	7754.99	14426.45	6114.31	11678.64	1052.1	11982.13	4150.35	3004.44	3103.73	8282.49
2015	14036.48	11452.17	8438.04	14806.21	7104.22	12606.93	1031.95	11888.32	4448.84	3374.09	3620.66	8785.27

Note: IM="Inner Mongolia"; GX="Guangxi"; CQ="Chongqing"; SC="Sichuan"; GZ="Guizhou"; YN="Yunnan"; TB="Tibet"; SX="Shannxi"; GS="Gansu"; QH="Qinghai"; NX="Ningxia"; XJ="Xinjiang"

Appendix VI Fixed asset investment

Table 4 Fixed asset investment (FAI)

Year	IM	GX	CQ	SC	GZ	YN	TB	SX	GS	QH	NX	XJ
1994	250.99	382.59	240.66	573.43	140.95	321.73	21.17	283.29	159.05	45.2	60.98	285.48
1995	273.06	423.37	296.54	677.34	173.66	380.57	36.95	324.33	194.67	55.58	70.12	333.34
1996	275.54	476.42	320.73	803.79	207.1	448.02	30.37	372	214.83	77.6	77.32	387.85
1997	317.5	479.8	370.95	949.3	247.23	540.5	34.55	424.1	264.39	97.66	88.1	446.81
1998	316.76	562.32	492.97	1145.33	278.41	660.43	41.26	517.57	301.45	108.78	106.75	514.77
1999	348.22	578.76	525.26	1224.4	311.93	663.97	53.56	587.79	355.51	117.15	128.1	526.65
2000	423.64	583.34	572.59	1418.04	396.98	683.96	64.05	653.67	395.4	151.14	157.52	610.39
2001	503.63	655.63	697.03	1617.52	536.01	738.45	83.26	773.43	460.37	196.35	191.08	706
2002	707.91	750.33	899.26	1902.72	632.97	814.61	106.58	915.35	526.21	232.35	226.98	800.09
2003	1174.66	921.3	1161.51	2336.34	748.12	1000.12	133.96	1200.68	619.82	255.62	317.99	973.39
2004	1787.95	1236.51	1537.05	2818.42	865.23	1291.54	162.36	1508.89	733.94	289.18	376.2	1147.15
2005	2643.6	1661.17	1933.16	3585.18	998.25	1777.63	181.39	1882.18	870.36	329.81	443.25	1339.06
2006	3363.21	2198.72	2407.36	4412.88	1197.43	2208.6	231.14	2480.69	1022.59	408.54	498.75	1567.05
2007	4372.88	2939.67	3127.74	5639.8	1488.8	2759.03	270.34	3415.02	1304.16	482.84	599.8	1850.84
2008	5475.41	3756.41	3979.59	7127.81	1864.45	3435.93	309.91	4614.42	1712.78	583.24	828.85	2259.97
2009	7336.79	5237.24	5214.28	11371.87	2412.02	4526.37	378.28	6246.9	2363	798.23	1075.91	2725.45

2010	8926.46	7057.56	6688.91	13116.72	3104.92	5528.71	462.67	7963.67	3158.34	1016.87	1444.16	3423.24
2011	10365.17	7990.66	7473.38	14222.22	4235.92	6191	516.31	9431.08	3965.79	1435.58	1644.74	4632.14
2012	11875.7	9808.6	8736.2	17040	5717.8	7831.1	670.5	12044.5	5145	1883.4	2096.9	6158.8
2013	14217.38	11907.67	10435.24	20326.11	7373.6	9968.3	876	14884.15	6527.94	2361.09	2651.14	7732.3
2014	17591.83	13843.22	12285.42	23318.57	9025.75	11498.53	1069.23	17191.92	7884.13	2861.23	3173.79	9447.74
2015	13702.22	16227.78	14353.24	25525.9	10945.54	13500.62	1295.68	18582.24	8754.23	3210.63	3505.45	10813.03

Note: IM="Inner Mongolia"; GX="Guangxi"; CQ="Chongqing"; SC="Sichuan"; GZ="Guizhou"; YN="Yunnan"; TB="Tibet"; SX="Shannxi"; GS="Gansu"; QH="Qinghai"; NX="Ningxia"; XJ="Xinjiang"

60 **Appendix VII Fiscal expenditure**61 **Table 5 Fiscal expenditure (FE)**

Year	IM	GX	CQ	SC	GZ	YN	TB	SX	GS	QH	NX	XJ
1994	92.82	124.93	39.52	181.31	74.23	203.73	30.3	85.52	72.38	25.36	19.38	71.1
1995	102.18	140.59	60.01	211.5	85.33	235.1	34.87	102.69	81.39	28.8	22.99	96.4
1996	126.38	157.01	79.42	247.3	99.58	270.39	36.85	121.79	90.95	32.71	29.52	114.89
1997	142.91	170.83	101.01	275.1	113.79	313.2	38.2	144.53	106.72	36.47	33.63	126.82
1998	170.31	198.36	125.76	320.93	133.09	328	45.32	166.2	125.34	44.09	45.12	145.99
1999	199.8	224.98	150.24	363.5	170.72	378.05	53.25	206.52	147.79	55.72	49.53	166.28
2000	247.27	258.49	187.64	452	201.57	414.11	59.97	271.76	188.23	68.26	60.84	190.95
2001	319.26	351.65	237.55	594.1	275.2	496.43	104.57	350.05	235.46	101.3	93.58	263.32
2002	393.57	419.86	305.86	701.62	316.67	526.89	137.84	404.91	274.01	118.73	114.57	361.17
2003	447.26	443.6	341.58	732.3	332.35	587.35	145.91	418.2	300.01	122.04	105.78	368.47
2004	564.11	507.47	395.72	895.25	418.42	663.64	133.83	516.31	356.94	137.34	123.02	421.04
2005	681.88	611.48	487.35	1082.18	520.73	766.31	185.45	638.96	429.35	169.75	160.25	519.02
2006	812.13	729.52	594.25	1347.4	610.64	893.58	200.2	824.18	528.59	214.66	193.21	678.47
2007	1082.31	985.94	768.39	1759.13	795.4	1135.22	275.37	1053.97	675.34	282.2	241.85	795.15
2008	1454.57	1297.11	1016.01	2948.83	1053.79	1470.24	380.66	1428.52	968.43	363.6	324.61	1059.36
2009	1926.84	1621.82	1292.09	3590.72	1372.27	1952.34	470.13	1841.64	1246.28	486.75	432.36	1346.91

2010	2273.5	2007.59	1709.04	4257.98	1631.48	2285.72	551.04	2218.83	1468.58	743.4	557.53	1698.91
2011	2989.21	2545.28	2570.24	4674.92	2249.4	2929.6	758.11	2930.81	1791.24	967.47	705.91	2284.49
2012	3425.99	2985.23	3046.36	5450.99	2755.68	3572.66	905.34	3323.8	2059.56	1159.05	864.36	2720.07
2013	3686.52	3208.67	3062.28	6220.91	3082.66	4096.51	1014.31	3665.07	2309.62	1228.05	922.48	3067.12
2014	3879.98	3479.79	3304.39	6796.61	3542.8	4437.98	1185.51	3962.5	2541.49	1347.43	1000.45	3317.79
2015	4252.96	4065.51	3792	7497.51	3939.5	4712.83	1381.46	4376.06	2958.31	1515.16	1138.49	3804.87

Note: IM="Inner Mongolia"; GX="Guangxi"; CQ="Chongqing"; SC="Sichuan"; GZ="Guizhou"; YN="Yunnan"; TB="Tibet"; SX="Shannxi"; GS="Gansu"; QH="Qinghai"; NX="Ningxia"; XJ="Xinjiang"

64 Appendix VIII Foreign direct investment

65 Table 6 Foreign direct investment (FDI)

Year	IM	GX	CQ	SC	GZ	YN	TB	SX	GS	QH	NX	XJ
1994	1734	12568	6125	10751	1771	2045	193	3761	1147	93	375	1266
1995	1987	13453	6253	12680	1969	2870	203	4593	1636	143	430	1421
1996	2307	11794	7561	14157	2041	3320	5606	237	1803	191	478	1418
1997	2310	11835	10019	2265	3680	6439	239	1985	244	506	1513	5780
1998	2178	11972	6630	9627	2394	4183	284	6848	1822	401	579	1519
1999	2268	10890	7258	10043	2006	4362	256	7694	1825	880	819	1277
2000	2536	10850	6602	10107	1493	4819	335	8322	2565	577	940	1143
2001	2217	10246	7024	10939	1599	5377	343	9596	2464	648	1062	1120
2002	2423	10444	6893	11998	1891	6055	349	10625	2166	700	2260	1144
2003	3836	10448	6547	13632	2100	7309	359	11600	2164	786	3884	1251
2004	10811	12678	7245	13982	2234	7892	331	12463	3059	959	4067	1448
2005	12640	14710	8030	16600	2340	8420	350	13700	3160	700	4455	1850
2006	14800	18000	9300	19900	2600	10700	400	14900	2800	2000	4400	2600
2007	17148	21908	19774	26868	2797	11833	509	16474	3064	2426	2183	3090
2008	22155	25826	23848	42113	3215	14106	550	13692	3827	3311	2449	4560
2009	24000	27200	27800	46100	3600	15900	600	16200	4900	2800	2500	4800

2010	23243	27973	34885	54383	4132	17949	534	18044	6289	2349	3964	5229
2011	25519	29942	45194	57419	5681	20641	726	19888	6394	3144	4399	5602
2012	25802	31143	53694	64045	7670	22561	1131	31130	6979	2829	3098	6655
2013	22911	31927	58841	72490	11856	24097	1311	36629	6510	2981	3537	6453
2014	26449	37396	67517	82752	15472	25253	1328	44734	6764	3095	5164	7586
2015	35142	42529	78845	88409	18147	32720	1997	51571	7657	7396	8972	8518

Note: IM="Inner Mongolia"; GX="Guangxi"; CQ="Chongqing"; SC="Sichuan"; GZ="Guizhou"; YN="Yunnan"; TB="Tibet"; SX="Shannxi"; GS="Gansu"; QH="Qinghai"; NX="Ningxia"; XJ="Xinjiang"

Appendix IX Railway line length

Table 7 Railway line length (RLL)

Year	IM	GX	CQ	SC	GZ	YN	TB	SX	GS	QH	NX	XJ
1994	0.51	0.2	0	0.31	0.14	0.17	0	0.18	0.22	0.11	0.05	0.13
1995	0.51	0.21	0	0.31	0.14	0.17	0	0.2	0.23	0.11	0.08	0.13
1996	0.6	0.23	0.06	0.31	0.14	0.17	0	0.22	0.23	0.11	0.08	0.18
1997	0.6	0.26	0.06	0.26	0.16	0.2	0	0.22	0.23	0.11	0.08	0.18
1998	0.6	0.27	0.06	0.25	0.16	0.19	0	0.22	0.23	0.11	0.08	0.18
1999	0.6	0.27	0.06	0.28	0.17	0.21	0	0.22	0.23	0.11	0.08	0.23
2000	0.5	0.2	0.06	0.23	0.16	0.19	0	0.22	0.23	0.11	0.07	0.23
2001	0.6	0.27	0.06	0.25	0.16	0.19	0	0.29	0.27	0.13	0.08	0.28
2002	0.62	0.27	0.07	0.29	0.19	0.24	0	0.29	0.23	0.11	0.08	0.28
2003	0.62	0.27	0.07	0.3	0.19	0.23	0	0.29	0.23	0.11	0.08	0.28
2004	0.63	0.27	0.07	0.3	0.19	0.23	0	0.32	0.23	0.11	0.08	0.28
2005	0.62	0.27	0.13	0.3	0.2	0.23	0	0.31	0.23	0.11	0.08	0.28
2006	0.64	0.27	0.13	0.3	0.2	0.23	0.06	0.32	0.24	0.17	0.08	0.28
2007	0.67	0.27	0.13	0.3	0.2	0.23	0.06	0.32	0.24	0.17	0.08	0.28
2008	0.68	0.27	0.13	0.3	0.2	0.23	0.05	0.32	0.24	0.17	0.08	0.28
2009	0.81	0.31	0.13	0.33	0.2	0.25	0.05	0.33	0.24	0.17	0.09	0.37
2010	0.89	0.32	0.14	0.35	0.2	0.25	0.05	0.41	0.24	0.19	0.12	0.42
2011	0.92	0.32	0.14	0.35	0.21	0.25	0.05	0.41	0.24	0.19	0.13	0.43
2012	0.95	0.32	0.15	0.35	0.21	0.26	0.05	0.41	0.25	0.19	0.13	0.47
2013	1.02	0.4	0.17	0.35	0.21	0.26	0.05	0.44	0.26	0.19	0.13	0.47
2014	1.02	0.47	0.18	0.4	0.24	0.29	0.08	0.45	0.34	0.21	0.13	0.55
2015	1.21	0.51	0.19	0.44	0.28	0.29	0.08	0.45	0.38	0.23	0.13	0.59

Note: IM="Inner Mongolia"; GX="Guangxi"; CQ="Chongqing"; SC="Sichuan"; GZ="Guizhou"; YN="Yunnan"; TB="Tibet"; SX="Shannxi"; GS="Gansu"; QH="Qinghai"; NX="Ningxia"; XJ="Xinjiang"

Appendix X Ordinary higher school

Table 8 Ordinary higher school (OHS)

Year	IM	GX	CQ	SC	GZ	YN	TB	SX	GS	QH	NX	XJ
1994	19	27	21	63	22	26	4	47	17	7	7	21
1995	19	27	21	64	22	26	4	46	17	7	7	21
1996	19	27	22	64	22	26	4	43	17	7	7	18
1997	18	26	22	43	20	26	4	43	17	6	5	18
1998	19	28	22	43	20	26	4	42	17	6	5	17
1999	19	29	23	43	20	24	4	43	18	6	5	17
2000	18	30	22	42	23	24	4	39	18	7	6	16
2001	20	30	29	49	30	28	3	47	25	8	8	21
2002	21	36	29	57	32	31	3	52	25	11	12	22
2003	27	45	34	62	34	34	4	57	31	12	12	26
2004	31	49	35	68	34	43	4	62	31	11	13	28
2005	33	51	35	68	34	44	4	72	33	11	13	30
2006	37	55	38	74	36	50	6	76	33	11	13	31
2007	37	56	38	76	37	51	6	76	34	11	13	32
2008	39	68	47	90	45	59	6	88	39	9	15	37
2009	41	68	50	92	47	61	6	89	39	9	15	37
2010	44	70	53	92	47	61	6	90	40	9	15	37
2011	47	70	59	93	48	64	6	90	42	9	16	37
2012	48	70	60	99	49	66	6	91	42	9	16	39
2013	49	70	63	103	52	67	6	92	42	9	16	41
2014	50	70	63	107	55	67	6	92	43	12	18	44
2015	53	71	64	109	59	69	6	92	45	12	18	44

Note: IM="Inner Mongolia"; GX="Guangxi"; CQ="Chongqing"; SC="Sichuan"; GZ="Guizhou"; YN="Yunnan"; TB="Tibet"; SX="Shannxi"; GS="Gansu"; QH="Qinghai"; NX="Ningxia"; XJ="Xinjiang"

76 **Appendix XI Medical institutions**77 **Table 9 Medical institutions (MI)**

Year	IM	GX	CQ	SC	GZ	YN	TB	SX	GS	QH	NX	XJ
1994	4918	5564	4256	14217	3930	6474	1152	6227	4134	1177	1037	3907
1995	4915	5571	4658	14094	3934	6400	1198	6215	4131	1176	1028	3932
1996	5037	5470	4777	13965	10932	11122	1300	6033	9109	1201	476	7259
1997	4863	13851	4743	31878	8955	11454	1324	5947	8962	1201	482	6614
1998	7517	13888	9716	31917	9113	11867	1307	10440	8977	1903	1654	6615
1999	7535	13319	9625	32633	9703	11875	1254	10563	8976	2406	1438	6608
2000	7852	13707	9375	33351	8992	13356	1237	10737	7191	1847	1361	6705
2001	8559	13363	9096	33412	8791	12552	1284	11365	7225	1437	1261	5279
2002	6574	10107	5948	28204	7022	8798	1348	12462	11062	1450	1370	10296
2003	4036	6610	3730	16756	13178	3006	5166	14369	8037	9559	8990	9618
2004	7416	9034	6539	24605	6664	9436	1326	11703	11404	1439	1483	9086
2005	7629	9416	6380	23832	6571	10110	1378	11701	11849	1478	1463	8087
2006	7958	9977	6613	24015	6147	10020	1349	11631	12022	1643	1553	8175
2007	9076	10060	6293	21380	5956	9693	1322	9708	12024	1619	1530	7465
2008	7162	10427	6265	20738	5848	9249	1326	8812	10534	1582	1629	6739
2009	22677	32355	16497	72914	24707	22365	4959	33928	25299	5959	4149	14244

2010	22565	32741	17495	74283	25420	22888	4960	35696	26673	5781	4129	16000
2011	22908	34026	17650	75815	25943	23248	6602	36396	26632	5887	4132	17412
2012	23046	34152	17961	76557	27404	23395	6660	36271	26401	5948	4140	18320
2013	23257	33943	18926	80037	29177	24264	6725	37137	26697	6020	4231	18663
2014	23426	34667	18767	81070	28995	24281	6795	37247	27916	6241	4255	18873
2015	23886	34439	19806	80109	28712	24181	6814	37030	27799	6223	4288	18798

Note: IM="Inner Mongolia"; GX="Guangxi"; CQ="Chongqing"; SC="Sichuan"; GZ="Guizhou"; YN="Yunnan"; TB="Tibet"; SX="Shannxi"; GS="Gansu"; QH="Qinghai"; NX="Ningxia"; XJ="Xinjiang"

Appendix XII Human capital

Table 10 Human capital (HC)

Year	IM	GX	CQ	SC	GZ	YN	TB	SX	GS	QH	NX	XJ
1994	0.0174	0.0129	0.026	0.0147	0.0094	0.0131	0.0141	0.0367	0.0191	0.0153	0.0211	0.0257
1995	0.0164	0.0132	0.027	0.0157	0.0100	0.0130	0.0164	0.0367	0.0189	0.0153	0.0211	0.0259
1996	0.0166	0.0139	0.0278	0.0163	0.0101	0.0134	0.0141	0.0382	0.0194	0.0161	0.0203	0.0251
1997	0.0174	0.0153	0.0280	0.0175	0.0108	0.0141	0.0130	0.0396	0.0204	0.0167	0.0211	0.0260
1998	0.0182	0.0176	0.0290	0.0188	0.0117	0.0151	0.0136	0.0416	0.0215	0.0174	0.0212	0.0260
1999	0.0211	0.0204	0.0337	0.0224	0.0153	0.0177	0.0158	0.0497	0.0247	0.0184	0.0243	0.0300
2000	0.0303	0.0260	0.0443	0.0295	0.0212	0.0226	0.0213	0.0672	0.0328	0.0261	0.0316	0.0438
2001	0.0418	0.0317	0.0571	0.0389	0.0285	0.0278	0.0258	0.0859	0.0440	0.0342	0.0412	0.0576
2002	0.0506	0.0386	0.0711	0.0509	0.0320	0.0331	0.0313	0.1124	0.0565	0.0420	0.0512	0.0694
2003	0.0661	0.0468	0.0858	0.0627	0.0386	0.0401	0.0382	0.1359	0.0683	0.0489	0.0605	0.0763
2004	0.0830	0.0575	0.1019	0.0788	0.0461	0.0490	0.0533	0.1586	0.0788	0.0547	0.0704	0.0831
2005	0.0961	0.0726	0.1192	0.0944	0.0554	0.0572	0.0679	0.1807	0.0902	0.0604	0.0817	0.0904
2006	0.1047	0.0821	0.1339	0.1053	0.0600	0.0634	0.0818	0.1963	0.1035	0.0657	0.0925	0.0972
2007	0.1170	0.0911	0.1469	0.1130	0.0665	0.0689	0.0927	0.2094	0.1162	0.0683	0.1023	0.1033
2008	0.1296	0.1005	0.1585	0.1218	0.0744	0.0765	0.1007	0.2258	0.1301	0.0762	0.1141	0.1084
2009	0.1432	0.1088	0.1694	0.1266	0.0846	0.0861	0.1024	0.2398	0.1415	0.0786	0.1210	0.1119

2010	0.1502	0.1231	0.1812	0.1350	0.0929	0.0954	0.1037	0.2484	0.1490	0.0799	0.1267	0.1150
2011	0.1549	0.1292	0.1945	0.1415	0.0992	0.1053	0.1069	0.2578	0.1581	0.0805	0.1376	0.1171
2012	0.1572	0.1344	0.2117	0.1515	0.1102	0.1099	0.1088	0.2735	0.1672	0.0850	0.1490	0.1203
2013	0.1598	0.1390	0.2220	0.1568	0.1196	0.1170	0.1077	0.2863	0.1716	0.0877	0.1598	0.1230
2014	0.1622	0.1476	0.2312	0.1632	0.1312	0.1224	0.1053	0.2913	0.1746	0.0907	0.1683	0.1264
2015	0.1678	0.1573	0.2385	0.1698	0.1423	0.1300	0.1066	0.2906	0.1736	0.0981	0.1730	0.1308

Note: IM="Inner Mongolia"; GX="Guangxi"; CQ="Chongqing"; SC="Sichuan"; GZ="Guizhou"; YN="Yunnan"; TB="Tibet"; SX="Shannxi"; GS="Gansu"; QH="Qinghai"; NX="Ningxia"; XJ="Xinjiang"

Appendix XIII Patent authorization

Table 11 Patent authorization (PA)

Year	IM	GX	CQ	SC	GZ	YN	TB	SX	GS	QH	NX	XJ
1994	337	631	613	1960	248	439	3	1312	344	58	128	358
1995	415	665	775	2019	274	569	2	1085	257	65	111	312
1996	326	646	286	1844	259	602	2	968	286	43	105	362
1997	372	705	339	1591	337	692	6	946	295	56	84	328
1998	523	853	612	1971	418	832	10	1129	349	62	96	462
1999	723	1232	1078	2921	620	1185	14	1569	494	123	150	859
2000	775	1191	1158	3218	710	1217	17	1462	493	117	224	717
2001	743	1099	1197	3357	642	1347	22	1354	512	101	231	755
2002	679	1054	1761	3403	615	1128	7	1524	397	85	216	627
2003	817	1331	2883	4051	723	1213	16	1609	474	90	338	752
2004	831	1272	3601	4430	737	1264	23	2007	514	70	293	792
2005	845	1225	3591	4606	925	1381	44	1894	547	79	214	921
2006	978	1442	4590	7138	1337	1637	81	2473	832	97	290	1187
2007	1313	1907	4994	9935	1727	2139	68	3451	1025	222	296	1534
2008	1328	2228	4820	13369	1728	2021	93	4392	1047	228	606	1493
2009	1494	2702	7501	20132	2084	2923	292	6087	1274	368	910	1866

2010	2096	3647	12080	32212	3086	3823	124	10034	1868	264	1081	2562
2011	2262	4402	15525	28446	3386	4199	142	11662	2383	538	613	2642
2012	3084	5900	20364	42218	6059	5853	133	14908	3662	527	844	3439
2013	3836	7884	24828	46171	7915	6804	121	20836	4737	502	1211	4998
2014	4031	9664	24312	47120	10107	8124	146	22820	5097	619	1424	5238
2015	5522	13573	38914	64953	14115	11658	198	33350	6912	1217	1865	8761

Note: IM="Inner Mongolia"; GX="Guangxi"; CQ="Chongqing"; SC="Sichuan"; GZ="Guizhou"; YN="Yunnan"; TB="Tibet"; SX="Shannxi"; GS="Gansu"; QH="Qinghai"; NX="Ningxia"; XJ="Xinjiang"

88 **Appendix XIV Krugman index**89 **Table B.12 Krugman index (Krugman)**

Year	IM	GX	CQ	SC	GZ	YN	TB	SX	GS	QH	NX	XJ
1994	0.143	0.124	0.156	0.141	0.215	0.134	0.473	0.166	0.138	0.130	0.152	0.131
1995	0.140	0.140	0.145	0.130	0.223	0.150	0.346	0.157	0.183	0.150	0.167	0.149
1996	0.154	0.164	0.163	0.142	0.216	0.170	0.435	0.172	0.168	0.170	0.166	0.153
1997	0.135	0.178	0.159	0.132	0.205	0.171	0.350	0.175	0.147	0.166	0.161	0.130
1998	0.130	0.167	0.155	0.124	0.176	0.176	0.342	0.160	0.139	0.151	0.145	0.131
1999	0.123	0.166	0.144	0.126	0.169	0.144	0.333	0.162	0.140	0.145	0.138	0.125
2000	0.116	0.160	0.135	0.128	0.159	0.127	0.335	0.159	0.115	0.141	0.135	0.110
2001	0.104	0.156	0.131	0.122	0.144	0.120	0.331	0.160	0.106	0.129	0.135	0.104
2002	0.107	0.158	0.134	0.129	0.142	0.123	0.391	0.164	0.110	0.135	0.137	0.114
2003	0.102	0.153	0.132	0.116	0.120	0.111	0.310	0.169	0.103	0.141	0.141	0.124
2004	0.111	0.165	0.129	0.128	0.108	0.110	0.382	0.176	0.108	0.138	0.151	0.124
2005	0.110	0.169	0.122	0.124	0.115	0.113	0.378	0.164	0.109	0.148	0.141	0.142
2006	0.119	0.182	0.146	0.130	0.144	0.128	0.383	0.161	0.116	0.153	0.133	0.151
2007	0.131	0.178	0.143	0.150	0.202	0.141	0.382	0.152	0.121	0.160	0.139	0.148
2008	0.143	0.185	0.155	0.145	0.232	0.158	0.398	0.153	0.133	0.181	0.150	0.157
2009	0.153	0.158	0.157	0.138	0.229	0.159	0.348	0.148	0.130	0.162	0.149	0.146
2010	0.156	0.155	0.166	0.136	0.246	0.162	0.370	0.149	0.131	0.163	0.156	0.199
2011	0.170	0.172	0.171	0.159	0.271	0.203	0.348	0.163	0.155	0.208	0.165	0.170
2012	0.171	0.161	0.160	0.153	0.243	0.181	0.338	0.177	0.149	0.209	0.161	0.171
2013	0.170	0.155	0.166	0.157	0.176	0.159	0.278	0.187	0.141	0.177	0.148	0.167
2014	0.141	0.142	0.156	0.129	0.140	0.147	0.259	0.178	0.129	0.170	0.134	0.149
2015	0.157	0.156	0.145	0.117	0.135	0.132	0.211	0.155	0.172	0.149	0.129	0.150

Note: IM="Inner Mongolia"; GX="Guangxi"; CQ="Chongqing"; SC="Sichuan"; GZ="Guizhou"; YN="Yunnan"; TB="Tibet"; SX="Shannxi"; GS="Gansu"; QH="Qinghai"; NX="Ningxia"; XJ="Xinjiang"

Appendix XV Population density

Table 13 Population density (PD)

Year	IM	GX	CQ	SC	GZ	YN	TB	SX	GS	QH	NX	XJ
1994	19.21	191.49	346.71	165.20	197.78	101.65	1.94	169.92	53.08	6.62	76.52	10.44
1995	19.40	193.56	348.92	166.44	200.44	102.98	1.97	171.44	54.06	6.72	77.83	10.64
1996	19.58	195.45	348.79	165.42	203.29	104.29	2.00	172.82	54.68	6.82	79.08	10.71
1997	19.74	185.80	348.56	166.47	206.12	105.62	2.03	174.12	55.25	6.92	80.23	10.80
1998	19.89	187.42	347.76	165.38	209.10	106.87	2.06	175.28	55.79	7.02	81.32	10.88
1999	20.01	188.90	387.02	163.09	211.90	108.13	2.10	176.45	56.20	7.12	82.65	11.14
2000	20.05	200.72	345.74	171.38	213.21	108.74	2.10	177.07	55.43	7.17	83.43	11.14
2001	20.13	202.28	343.32	167.55	215.65	109.92	2.15	177.50	55.61	7.25	84.79	11.30
2002	20.15	203.72	341.50	166.87	217.80	111.10	2.18	177.94	55.79	7.34	86.14	11.48
2003	20.17	205.20	340.16	168.23	219.68	112.21	2.21	178.43	55.92	7.41	87.35	11.65
2004	20.23	206.55	338.95	166.46	221.61	113.21	2.25	178.86	56.01	7.48	88.55	11.83
2005	20.31	196.87	339.55	168.97	211.73	114.10	2.28	179.30	56.09	7.53	89.76	12.11
2006	20.41	199.37	340.77	168.09	209.46	114.95	2.32	179.74	56.14	7.60	90.96	12.35
2007	20.53	201.44	341.74	167.22	206.17	115.74	2.35	180.17	56.16	7.66	91.87	12.62
2008	20.66	203.46	344.53	167.45	204.12	116.49	2.38	180.66	56.23	7.68	93.07	12.84
2009	20.78	205.15	346.96	168.42	200.78	117.21	2.41	181.10	56.31	7.73	94.13	13.01
2010	20.90	194.76	350.11	165.53	197.48	118.00	2.44	181.49	56.42	7.81	95.33	13.16
2011	20.98	196.24	354.24	165.64	196.92	118.74	2.47	181.88	56.51	7.88	96.23	13.31

2012	21.05	197.80	357.39	166.17	197.77	119.46	2.51	182.36	56.82	7.95	97.44	13.45
2013	21.12	199.37	360.43	166.81	198.79	120.18	2.54	182.90	56.91	8.02	98.49	13.64
2014	21.17	200.84	362.98	167.49	199.13	120.87	2.59	183.43	57.11	8.09	99.70	13.84
2015	21.20	201.73	364.56	168.15	199.74	121.23	2.61	183.87	57.20	8.13	100.11	14.03

94 Note: IM="Inner Mongolia"; GX="Guangxi"; CQ="Chongqing"; SC="Sichuan"; GZ="Guizhou"; YN="Yunnan"; TB="Tibet"; SX="Shannxi"; GS="Gansu"; QH="Qinghai"; NX="Ningxia"; XJ="Xinjiang