**Appendix A**

**Table A1** Correlation matrix of the variables used in model

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | TP | PCGRP | PSTI | ASPCB | FDI | DH | DAirport | DPort | DPS | Distance | Latitude | DHSR |
| TP | 1.00 |  |  |  |  |  |  |  |  |  |  |  |
| PCGRP | 0.02 | 1.00 |  |  |  |  |  |  |  |  |  |  |
| PSTI | 0.03 | 0.56 | 1.00 |  |  |  |  |  |  |  |  |  |
| ASPCB | 0.16 | 0.37 | 0.29 | 1.00 |  |  |  |  |  |  |  |  |
| FDI | 0.50 | 0.56 | 0.36 | 0.34 | 1.00 |  |  |  |  |  |  |  |
| DH | 0.30 | 0.30 | 0.32 | 0.35 | 0.34 | 1.00 |  |  |  |  |  |  |
| DAirport | 0.22 | 0.12 | 0.16 | 0.13 | 0.15 | -0.12 | 1.00 |  |  |  |  |  |
| DPort | 0.14 | -0.02 | -0.09 | 0.12 | 0.06 | 0.23 | 0.00 | 1.00 |  |  |  |  |
| DPS | 0.40 | 0.26 | 0.36 | 0.23 | 0.42 | 0.12 | 0.37 | -0.08 | 1.00 |  |  |  |
| Distance | 0.02 | -0.22 | -0.24 | -0.12 | -0.16 | -0.10 | 0.12 | -0.13 | 0.02 | 1.00 |  |  |
| Latitude | -0.11 | 0.10 | 0.04 | -0.12 | 0.00 | -0.26 | 0.04 | -0.46 | 0.01 | 0.14 | 1.00 |  |
| DHSR | 0.18 | 0.33 | 0.19 | 0.31 | 0.29 | 0.36 | 0.00 | -0.02 | 0.20 | -0.08 | 0.02 | 1.00 |

**Table A2.** Results of the DID estimates for CA with the whole samples

|  |  |  |  |
| --- | --- | --- | --- |
| Model | Urban land | Agricultural land | Natural land |
| Fixed | Pooled | Fixed | Pooled | Fixed | Pooled |
| **HSR variables** |  |  |  |  |  |  |
| DHSR | -0.0300(0.0277) | -0.0672(0.0553) | -0.0187\*\*\*(0.0063) | -0.0901\*(0.0461) | -0.0074(0.0072) | 0.1249(0.0861) |
| DhasHSR | - | 0.1264(0.1104) |  | -0.0556(0.0771) |  | -0.1379(0.1624) |
| **Controls** |  |  |  |  |  |  |
| Log(TP) | 0.5468\*(0.3122) | 0.8248\*\*\*(0.0679) | -0.0258(0.0511) | 1.0097\*\*\*(0.0694) | -0.3330(0.2379) | 0.8046\*\*\*(0.0964) |
| Log(PCGRP) | 0.0246(0.0803) | 0.4795\*\*\*(0.1171) | 0.0233(0.0150) | 0.1235(0.0856) | 0.0135(0.0171) | 0.1386(0.1743) |
| PSTI | -0.5092(0.4553) | -1.9770\*\*\*(0.7317) | 0.1464(0.1011) | -2.1087\*\*\*(0.4547) | 0.1315\*(0.0756) | 2.2882\*\*(1.0277) |
| Log(ASPCB) | 0.0150(0.0132) | -0.0668(0.0588) | 0.0033(0.0023) | -0.1315\*\*(0.0592) | 0.0047(0.0031) | 0.0686(0.0924) |
| Log(FDI) | 0.0140(0.0097) | 0.0948\*\*(0.0369) | 0.0028(0.0021) | -0.0469\*(0.0241) | 0.0010(0.0024) | -0.0414(0.0383) |
| Log(HD) | 0.0319(0.0405) | -0.2122\*\*(0.0899) | -0.0019(0.0088) | -0.3218\*\*\*(0.0731) | -0.0010(0.0092) | -1.6475\*\*\*(0.1631) |
| DAirport | - | -0.2358\*\*(0.0935) | - | 0.0468(0.0592) | - | 0.2764\*\*(0.1143) |
| DPort | - | -0.3351\*\*\*(0.0856) | - | 0.0036(0.0639) | - | 0.0792(0.1671) |
| Log(Distance) | - | -0.1566\*\*\*(0.0290) | - | 0.0535\*\*(0.0227) | - | 0.1585\*\*\*(0.0339) |
| Log(Latitude) | - | 1.6418\*\*\*(0.2043) | - | 1.6059\*\*\*(0.1691) | - | -1.1529\*\*\*(0.3124) |
| DPS | - | 0.0792(0.1436) | - | -0.2239(0.1367) | - | -0.5784\*\*\*(0.1659) |
| Intercept | - | -0.7991(1.1837) | - | 5.1188\*\*\*(1.2814) | - | 18.2394\*\*\*(1.6924) |
|  |  |  |  |  |  |  |
| Year fixed effects | Yes | Yes | Yes | Yes | Yes | Yes |
| R2 | 0.65 | 0.71 | 0.27 | 0.81 | 0.12 | 0.59 |
| Hausman test | 133.82\*\*\* | - | 436.52\*\*\* | - | 297.77\*\*\* | - |
| Breusch-Pagan test | 112.27\*\*\* | 84.19\*\*\* | 46.61\*\*\* | 115.03\*\*\* | 74.92\*\*\* | 160.25\*\*\* |
| F-statistic | 42.41\*\*\* | 55.76\*\*\* | 12.84\*\*\* | 42.84\*\*\* | 1.28 | 23.69\*\*\* |
| Number of ids | 149 | 149 | 149 | 149 | 149 | 149 |
| Number observations | 596 | 596 | 596 | 596 | 596 | 596 |

Notes：Standard errors in parenthesis

\*\*\*/\*\*/\* Statistical significance at 1%/5%/10%

**Table A3.** Results of the DID estimates for NP with the whole samples

|  |  |  |  |
| --- | --- | --- | --- |
| Model | Urban land | Agricultural land | Natural land |
| Fixed | Pooled | Fixed | Pooled | Fixed | Pooled |
| **HSR variables** |  |  |  |  |  |  |
| DHSR | -0.0056(0.0323) | 0.0105(0.0685) | -0.0377(0.0357) | -0.0053(0.0990) | -0.0819\*(0.0419) | -0.0826(0.0956) |
| DhasHSR | - | -0.0267(0.1339) | - | -0.1098(0.1898) | - | -0.1651(0.1516) |
| **Controls** |  |  |  |  |  |  |
| Log(TP) | -0.2447(0.6862) | 0.8326\*\*\*(0.1089) | -0.8954\*\*\*(0.3324) | 0.8651\*\*\*(0.1364) | -0.4659(0.6085) | 0.9227\*\*\*(0.1244) |
| Log(PCGRP) | -0.0762(0.0609) | 0.0802(0.1627) | -0.0186(0.0824) | -0.1342(0.2041) | 0.0045(0.0749) | 0.1308(0.1522) |
| PSTI | -0.3236(0.4298) | -1.4578(0.9791) | -0.3423(0.2787) | 4.6927\*\*\*(1.2273) | -0.2633(0.3350) | -0.0242(0.9685) |
| Log(ASPCB) | -0.0242\*\*(0.0119) | -0.1409(0.0868) | 0.0041(0.0124) | 0.0106(0.1093) | 0.0231\*(0.0125) | -0.0906(0.0957) |
| Log(FDI) | 0.0374\*\*\*(0.0100) | 0.1545\*\*\*(0.0452) | 0.0190\*(0.0101) | -0.1066\*\*(0.0521) | 0.0289\*\*(0.0113) | -0.0581(0.0367) |
| Log(HD) | -0.0016(0.0362) | -0.2223\*(0.1274) | 0.0113(0.0395) | -1.1059\*\*\*(0.1806) | 0.0018(0.0418) | -0.3355\*\*(0.1319) |
| DAirport | - | -0.3206\*\*\*(0.1177) | - | 0.3716\*\*(0.1552) | - | 0.0395(0.1238) |
| DPort | - | -0.2784\*\*(0.1127) | - | 0.1573(0.1625) | - | 0.5309\*\*\*(0.1401) |
| Log(Distance) | - | -0.1057\*\*\*(0.0317) | - | 0.1886\*\*\*(0.0440) | - | 0.1057\*\*(0.0442) |
| Log(Latitude) | - | 1.4196\*\*\*(0.2881) | - | -1.8168\*\*\*(0.3407) | - | 0.8226\*\*\*(0.2989) |
| DPS | - | -0.2592(0.2101) | - | -0.6544\*\*(0.3002) | - | -0.3593(0.2680) |
| Intercept | - | 0.1198(1.7053) | - | 12.2833\*\*\*(2.1798) | - | -0.0296(2.1666) |
|  |  |  |  |  |  |  |
| Year fixed effects | Yes | Yes | Yes | Yes | Yes | Yes |
| R2 | 0.35 | 0.52 | 0.14 | 0.45 | 0.10 | 0.44 |
| Hausman test | 54.65\*\*\* | - | 26.42\*\*\* | - | 76.43\*\*\* | - |
| Breusch-Pagan test | 87.85\*\*\* | 70.64\*\*\* | 28.97\*\*\* | 59.23\*\*\* | 20.04\*\*\* | 91.58\*\*\* |
| F-statistic | 9.24\*\*\* | 17.65\*\*\* | 16.13\*\*\* | 17.96\*\*\* | 9.74\*\*\* | 13.20\*\*\* |
| Number of ids | 149 | 149 | 149 | 149 | 149 | 149 |
| Number observations | 596 | 596 | 596 | 596 | 596 | 596 |

Notes：Standard errors in parenthesis

\*\*\*/\*\*/\* Statistical significance at 1%/5%/10%

**Table A4.** Results of the DID estimates for MPS with the whole samples

|  |  |  |  |
| --- | --- | --- | --- |
| Model | Urban land | Agricultural land | Natural land |
| Fixed | Pooled | Fixed | Pooled | Fixed | Pooled |
| **HSR variables** |  |  |  |  |  |  |
| DHSR | -0.0243(0.0293) | -0.0777(0.0542) | 0.0190(0.0359) | -0.0848(0.1016) | 0.0745\*(0.0398) | 0.2075\*\*(0.0972) |
| DhasHSR | - | 0.1531(0.1006) | - | 0.0542(0.2006) | - | 0.0272(0.1791) |
| **Controls** |  |  |  |  |  |  |
| Log(TP) | 0.7915(0.6310) | -0.0078(0.0844) | 0.8696\*\*(0.3475) | 0.1446(0.1351) | 0.1329(0.4297) | -0.1181(0.1432) |
| Log(PCGRP) | 0.1008(0.0790) | 0.3993\*\*\*(0.1255) | 0.0419(0.088) | 0.2577(0.2025) | 0.0090(0.0770) | 0.0078(0.2125) |
| PSTI | -0.1856(0.3132) | -0.5192(0.5817) | 0.4887(0.3008) | -6.8015\*\*\*(1.2306) | 0.3948(0.3195) | 2.3123\*(1.1978) |
| Log(ASPCB) | 0.0393\*\*\*(0.0116) | 0.0741(0.0613) | -0.0008(0.0130) | -0.1420(0.1173) | -0.0184(0.0121) | 0.1592(0.1160) |
| Log(FDI) | -0.0234\*\*\*(0.0076) | -0.0597\*\*(0.0234) | -0.0162(0.0108) | 0.0598(0.0525) | -0.0279\*\*(0.0117) | 0.0168(0.0441) |
| Log(HD) | 0.0335(0.0374) | 0.0101(0.0823) | -0.0132(0.0417) | 0.7841\*\*\*(0.1719) | -0.0028(0.0433) | -1.3120\*\*\*(0.1360) |
| DAirport | - | 0.0848(0.0743) | - | -0.3248\*\*(0.1615) | - | 0.2369(0.1494) |
| DPort | - | -0.0568(0.0759) | - | -0.1537(0.1702) | - | -0.4517\*\*\*(0.1568) |
| Log(Distance) | - | -0.0510\*\*(0.0197) | - | -0.1351\*\*\*(0.0482) | - | 0.0528(0.0474) |
| Log(Latitude) | - | 0.2222(0.2343) | - | 3.4227\*\*\*(0.3556) | - | -1.9756\*\*\*(0.3773) |
| DPS | - | 0.3384\*\*(0.1509) | - | 0.4305(0.2817) | - | -0.2191(0.2927) |
| Intercept | - | -0.9189(1.1509) | - | -7.1645\*\*\*(2.2700) | - | 18.2690\*\*\*(2.4373) |
|  |  |  |  |  |  |  |
| Year fixed effects | Yes | Yes | Yes | Yes | Yes | Yes |
| R2 | 0.38 | 0.35 | 0.17 | 0.46 | 0.10 | 0.47 |
| Hausman test | 47.79\*\*\* | - | 5.25 | - | 3.50 | - |
| Breusch-Pagan test | 42.94\*\*\* | 113.25\*\*\* | 30.04\*\*\* | 48.76\*\*\* | 29.60\*\*\* | 22.36\* |
| F-statistic | 26.11\*\*\* | 16.80\*\*\* | 18.51\*\*\* | 14.26\*\*\* | 10.78\*\*\* | 12.50\*\*\* |
| Number of ids | 149 | 149 | 149 | 149 | 149 | 149 |
| Number observations | 596 | 596 | 596 | 596 | 596 | 596 |

Notes：Standard errors in parenthesis

\*\*\*/\*\*/\* Statistical significance at 1%/5%/10%

**Table A5.** Results of the DID estimates for ED with the whole samples

|  |  |  |  |
| --- | --- | --- | --- |
| Model | Urban land | Agricultural land | Natural land |
| Fixed | Pooled | Fixed | Pooled | Fixed | Pooled |
| **HSR variables** |  |  |  |  |  |  |
| DHSR | -0.0183(0.0310) | -0.0238(0.0619) | -0.0022(0.0111) | -0.0321(0.0348) | -0.0191(0.0129) | 0.0313(0.0599) |
| DhasHSR | - | 0.1254(0.1169) | - | -0.0272(0.0803) | - | -0.0762(0.1200) |
| **Controls** |  |  |  |  |  |  |
| Log(TP) | 0.2377(0.5448) | -0.0426(0.1029) | -0.2790(0.2189) | 0.0568(0.0644) | -0.8112\*\*\*(0.2997) | 0.0089(0.0845) |
| Log(PCGRP) | -0.0294(0.0651) | 0.1633(0.1459) | -0.0246(0.0254) | -0.2852\*\*\*(0.0913) | 0.0122(0.0303) | -0.2179\*(0.1277) |
| PSTI | -0.6612(0.4457) | -1.6032\*(0.8603) | -0.0280(0.1121) | 2.0198\*\*\*(0.4685) | 0.0950(0.1248) | 3.1438\*\*\*(0.7150) |
| Log(ASPCB) | -0.0101(0.0134) | -0.1178(0.0851) | -0.0060(0.0038) | -0.0830(0.0505) | 0.0057(0.0051) | -0.0990(0.0680) |
| Log(FDI) | 0.0243\*\*(0.0098) | 0.1367\*\*\*(0.0407) | 0.0079\*\*(0.0035) | -0.0584\*\*(0.0260) | 0.0103\*\*(0.0042) | -0.1031\*\*\*(0.0317) |
| Log(HD) | 0.0146(0.0400) | 0.8170\*\*\*(0.1259) | -0.0016(0.0124) | 0.4420\*\*\*(0.0725) | -0.0198(0.0156) | 0.1133(0.1191) |
| DAirport | - | -0.4236\*\*\*(0.1116) | - | 0.0199(0.0673) | - | 0.1005(0.0919) |
| DPort | - | -0.2033\*(0.1140) | - | 0.0755(0.0694) | - | 0.2487\*\*(0.1166) |
| Log(Distance) | - | -0.1919\*\*\*(0.0354) | - | 0.0004(0.0175) | - | 0.0543\*(0.0293) |
| Log(Latitude) | - | 1.3750\*\*\*(0.2787) | - | 0.1259(0.1661) | - | -0.4776\*\*(0.2185) |
| DPS | - | 0.3388\*(0.1855) | - | 0.0897(0.1148) | - | 0.1113(0.1524) |
| Intercept | - | -7.6681\*\*\*(1.7296) | - | 1.4186(0.9866) | - | 4.0610\*\*\*(1.3283) |
|  |  |  |  |  |  |  |
| Year fixed effects | Yes | Yes | Yes | Yes | Yes | Yes |
| R2 | 0.51 | 0.60 | 0.06 | 0.43 | 0.16 | 0.28 |
| Hausman test | 33.48\*\*\* | - | 10.09 | - | 40.24\*\*\* | - |
| Breusch-Pagan test | 57.63\*\*\* | 47.61\*\*\* | 52.10\*\*\* | 91.94\*\*\* | 74.49\*\*\* | 139.48\*\*\* |
| F-statistic | 20.97\*\*\* | 24.89\*\*\* | 6.44\*\*\* | 6.37\*\*\* | 4.67\*\*\* | 4.82\*\*\* |
| Number of ids | 149 | 149 | 149 | 149 | 149 | 149 |
| Number observations | 596 | 596 | 596 | 596 | 596 | 596 |

Notes：Standard errors in parenthesis

\*\*\*/\*\*/\* Statistical significance at 1%/5%/10%

**Table A6.** Results of the DID estimates for AWMPFD with the whole samples

|  |  |  |  |
| --- | --- | --- | --- |
| Model | Urban land | Agricultural land | Natural land |
| Fixed | Pooled | Fixed | Pooled | Fixed | Pooled |
| **HSR variables** |  |  |  |  |  |  |
| DHSR | 0.0005(0.0019) | 0.0019(0.0021) | 0.0017(0.0013) | 0.0008(0.0026) | -0.0024\*\*(0.0011) | -0.0008(0.0042) |
| DhasHSR | - | -0.0012(0.0029) | - | -0.0081(0.0051) | - | -0.0013(0.0070) |
| **Controls** |  |  |  |  |  |  |
| Log(TP) | -0.0055(0.0192) | -0.0024(0.0022) | 0.0143(0.0141) | 0.0052(0.0045) | -0.0497\*\*\*(0.0128) | 0.0177\*\*\*(0.0049) |
| Log(PCGRP) | -0.0013(0.0032) | 0.0045(0.0031) | -0.0064\*\*(0.003) | -0.0154\*\*(0.0059) | -0.0004(0.0027) | -0.0204\*\*(0.0079) |
| PSTI | -0.0583\*\*\*(0.0159) | 0.0138(0.0181) | 0.0064(0.0124) | 0.0471(0.0318) | 0.0058(0.0162) | 0.2072\*\*\*(0.0471) |
| Log(ASPCB) | 0.0000(0.0007) | 0.0066\*\*\*(0.0016) | -0.0012\*(0.0007) | -0.0046(0.0034) | -0.0008(0.0006) | -0.0040(0.0037) |
| Log(FDI) | -0.0004(0.0004) | -0.0001(0.0007) | 0.0005(0.0004) | 0.0018(0.0014) | 0.0006\*(0.0003) | -0.0070\*\*\*(0.0021) |
| Log(HD) | -0.0019(0.0020) | 0.0101\*\*\*(0.0021) | -0.0013(0.0015) | 0.0185\*\*\*(0.0039) | 0.0006(0.0013) | -0.0115\*(0.0062) |
| DAirport | - | 0.0014(0.0021) | - | -0.0060(0.0047) | - | 0.0110\*(0.0057) |
| DPort | - | 0.0087\*\*\*(0.0024) | - | 0.0051(0.0049) | - | -0.0024(0.0059) |
| Log(Distance) | - | 0.0046\*\*\*(0.0008) | - | -0.0012(0.0011) | - | 0.0031\*(0.0016) |
| Log(Latitude) | - | -0.0214\*\*\*(0.0056) | - | 0.0458\*\*\*(0.0114) | - | -0.0353\*\*\*(0.0125) |
| DPS | - | 0.0027(0.0043) | - | 0.0035(0.0071) | - | -0.0007(0.0104) |
| Intercept | - | 0.1390\*\*\*(0.0355) | - | 0.1754\*\*\*(0.0612) | - | 0.5221\*\*\*(0.0829) |
|  |  |  |  |  |  |  |
| Year fixed effects | Yes | Yes | Yes | Yes | Yes | Yes |
| R2 | 0.27 | 0.44 | 0.10 | 0.27 | 0.11 | 0.33 |
| Hausman test | 41.12\*\*\* | - | 14.33\*\* | - | 13.60\* | - |
| Breusch-Pagan test | 54.28\*\*\* | 62.85\*\*\* | 36.56\*\*\* | 53.07\*\*\* | 15.87\*\* | 43.64\*\*\* |
| F-statistic | 8.69\*\*\* | 19.01\*\*\* | 5.83\*\*\* | 5.62\*\*\* | 6.36\*\*\* | 7.37\*\*\* |
| Number of ids | 149 | 149 | 149 | 149 | 149 | 149 |
| Number observations | 596 | 596 | 596 | 596 | 596 | 596 |

Notes：Standard errors in parenthesis

\*\*\*/\*\*/\* Statistical significance at 1%/5%/10%

**Table A7.** Results of the DID estimates for MSI with the whole samples

|  |  |  |  |
| --- | --- | --- | --- |
| Model | Urban land | Agricultural land | Natural land |
| Fixed | Pooled | Fixed | Pooled | Fixed | Pooled |
| **HSR variables** |  |  |  |  |  |  |
| DHSR | 0.0027(0.0063) | -0.0026(0.0084) | 0.0204\*\*(0.0102) | 0.0273(0.0182) | 0.0144\*\*(0.0058) | 0.0133(0.0110) |
| DhasHSR | - | 0.0017(0.0130) | - | 0.0040(0.0248) | - | -0.0168(0.0153) |
| **Controls** |  |  |  |  |  |  |
| Log(TP) | 0.0793(0.0940) | -0.0077(0.0113) | -0.0822(0.1053) | 0.0118(0.0166) | -0.1345\*(0.0705) | 0.0093(0.0143) |
| Log(PCGRP) | -0.0128(0.0129) | 0.0348\*\*(0.0160) | 0.0013(0.0174) | -0.0503\*\*(0.0241) | -0.0108(0.0147) | -0.0401\*(0.0219) |
| PSTI | -0.2096\*\*(0.1011) | -0.0837(0.0851) | -0.0244(0.1389) | 0.3913\*\*(0.1551) | 0.0156(0.0780) | 0.3762\*\*\*(0.1015) |
| Log(ASPCB) | -0.0020(0.0029) | 0.0211\*\*(0.0086) | -0.0033(0.0033) | -0.0086(0.0115) | 0.0014(0.0022) | -0.0271\*\*(0.0111) |
| Log(FDI) | -0.0015(0.0014) | -0.0075\*\*(0.0034) | -0.0019(0.0024) | -0.0150\*(0.0080) | -0.0017(0.0019) | -0.0188\*\*\*(0.0052) |
| Log(HD) | -0.0108(0.0089) | 0.0355\*\*\*(0.0125) | -0.0085(0.0098) | 0.0083(0.0185) | -0.0147\*\*(0.0074) | 0.0445\*\*\*(0.0132) |
| DAirport | - | 0.0188(0.0122) | - | 0.0169(0.0210) | - | 0.0170(0.0143) |
| DPort | - | 0.0312\*\*\*(0.0118) | - | -0.0314(0.0191) | - | -0.0303\*(0.0159) |
| Log(Distance) | - | 0.0165\*\*\*(0.0029) | - | -0.0020(0.0053) | - | 0.0146\*\*\*(0.0037) |
| Log(Latitude) | - | -0.0487\*(0.0292) | - | 0.0062(0.0419) | - | 0.1140\*\*\*(0.0309) |
| DPS | - | -0.0083(0.0227) | - | 0.0371(0.0323) | - | 0.0490\*\*(0.0233) |
| Intercept | - | -0.1763(0.1780) | - | 0.8555\*\*\*(0.2636) | - | 0.1510(0.2452) |
|  |  |  |  |  |  |  |
| Year fixed effects | Yes | Yes | Yes | Yes | Yes | Yes |
| R2 | 0.20 | 0.24 | 0.17 | 0.16 | 0.23 | 0.41 |
| Hausman test | 52.84\*\*\* | - | 257.45\*\*\* | - | 80.19\*\*\* | - |
| Breusch-Pagan test | 55.01\*\*\* | 94.80\*\*\* | 72.29\*\*\* | 127.83\*\*\* | 45.35\*\*\* | 115.37\*\*\* |
| F-statistic | 7.48\*\*\* | 8.08\*\*\* | 24.78\*\*\* | 13.23\*\*\* | 20.70\*\*\* | 12.72\*\*\* |
| Number of ids | 149 | 149 | 149 | 149 | 149 | 149 |
| Number observations | 596 | 596 | 596 | 596 | 596 | 596 |

Notes：Standard errors in parenthesis

\*\*\*/\*\*/\* Statistical significance at 1%/5%/10%

**Table A8.** Results of the DID estimates for CA with matched samples

|  |  |  |  |
| --- | --- | --- | --- |
| Model | Urban land | Agricultural land | Natural land |
| Fixed | Pooled | Fixed | Pooled | Fixed | Pooled |
| **HSR variables** |  |  |  |  |  |  |
| DHSR | -0.0503(0.0311) | -0.0842(0.0701) | -0.0112\*(0.0058) | -0.0570(0.0523) | 0.0023(0.0081) | 0.2504\*\*(0.1060) |
| DhasHSR | - | 0.0821(0.1379) | - | -0.0914(0.0930) | - | -0.2143(0.1421) |
| **Controls** |  |  |  |  |  |  |
| Log(TP) | 0.8437\*\*\*(0.2914) | 0.7455\*\*\*(0.0935) | -0.0622(0.0637) | 1.0613\*\*\*(0.0905) | -0.5359\*(0.2813) | 0.9485\*\*\*(0.1245) |
| Log(PCGRP) | 0.0835(0.0872) | 0.4481\*\*\*(0.1425) | 0.0273(0.0180) | 0.1359(0.1059) | 0.0038(0.0207) | 0.1040(0.1752) |
| PSTI | 0.1497(0.4518) | -1.9939\*(1.0790) | 0.0068(0.0982) | -2.2672\*\*\*(0.6074) | 0.1578\*(0.0910) | 2.5355\*\*(1.0908) |
| Log(ASPCB) | 0.0135(0.0154) | -0.0625(0.0744) | 0.0022(0.0025) | -0.1395\*\*(0.0619) | 0.0063(0.0043) | -0.0502(0.1002) |
| Log(FDI) | 0.0203(0.0134) | 0.1214\*\*(0.0491) | 0.0046\*(0.0025) | -0.0406(0.0319) | -0.0006(0.0034) | -0.0587(0.0373) |
| Log(HD) | 0.1020\*\*(0.0508) | -0.2447\*(0.1334) | -0.0020(0.0105) | -0.4426\*\*\*(0.0763) | 0.0034(0.0167) | -1.8218\*\*\*(0.1670) |
| DAirport | - | -0.3793\*\*(0.1480) | - | -0.0031(0.0860) | - | 0.1593(0.1362) |
| DPort | - | -0.2013(0.1257) | - | -0.0801(0.0916) | - | 0.1002(0.2061) |
| Log(Distance) | - | -0.1487\*\*\*(0.0353) | - | 0.0518\*\*(0.0252) | - | 0.1761\*\*\*(0.0473) |
| Latitude | - | 1.5872\*\*\*(0.3020) | - | 1.3698\*\*\*(0.2128) | - | -1.6400\*\*\*(0.4270) |
| PS | - | 0.1632(0.1803) | - | -0.0870(0.1388) | - | -0.6207\*\*\*(0.1812) |
| Intercept | - | 0.0724(1.7098) | - | 6.5021\*\*\*(1.3422) | - | 21.3126\*\*\*(1.9766) |
|  |  |  |  |  |  |  |
| Year fixed effects | Yes | Yes | Yes | Yes | Yes | Yes |
| R2 | 0.69 | 0.65 | 0.28 | 0.85 | 0.19 | 0.70 |
| Hausman test | 95.65\*\*\* | - | 449.92\*\*\* | - | 1383.70\*\*\* | - |
| Breusch-Pagan test | 100.56\*\*\* | 75.04\*\*\* | 16.74\*\* | 40.01\*\*\* | 16.28\*\* | 42.13\*\*\* |
| F-statistic | 31.99\*\*\* | 20.38\*\*\* | 8.89\*\*\* | 30.29\*\*\* | 1.07 | 20.47\*\*\* |
| Number of ids | 84 | 84 | 84 | 84 | 84 | 84 |
| Number observations | 336 | 336 | 336 | 336 | 336 | 336 |

Notes：Standard errors in parenthesis

\*\*\*/\*\*/\* Statistical significance at 1%/5%/10%

**Table A9.** Results of the DID estimates for NP with matched samples

|  |  |  |  |
| --- | --- | --- | --- |
| Model | Urban land | Agricultural land | Natural land |
| Fixed | Pooled | Fixed | Pooled | Fixed | Pooled |
| **HSR variables** |  |  |  |  |  |  |
| DHSR | 0.0207(0.0336) | 0.0753(0.0835) | -0.0458(0.0370) | 0.0803(0.1202) | -0.0369(0.0307) | 0.0200(0.0963) |
| DhasHSR | - | -0.0475(0.1611) | - | -0.0730(0.2071) | - | -0.1969(0.1613) |
| **Controls** |  |  |  |  |  |  |
| Log(TP) | 0.3738(0.7413) | 0.8084\*\*\*(0.1540) | -0.7878\*\*(0.3273) | 0.8120\*\*\*(0.1986) | -0.9480(0.7216) | 0.8294\*\*\*(0.1510) |
| Log(PCGRP) | -0.1200\*(0.0718) | 0.0135(0.2180) | 0.0456(0.0714) | -0.1452(0.2091) | 0.0751(0.0796) | 0.1117(0.1681) |
| PSTI | 0.2074(0.4553) | -1.7390(1.4355) | -0.1464(0.3336) | 4.0137\*\*\*(1.4843) | -0.3402(0.3795) | -1.1468(1.1094) |
| Log(ASPCB) | -0.0250(0.0154) | -0.0634(0.0974) | 0.0152(0.0146) | -0.0925(0.1412) | 0.0231(0.0145) | 0.0099(0.0922) |
| Log(FDI) | 0.0544\*\*\*(0.0129) | 0.1847\*\*\*(0.0602) | 0.0144(0.0144) | -0.1340\*\*(0.0588) | 0.0336\*\*(0.0164) | -0.0683(0.0485) |
| Log(HD) | 0.0008(0.0449) | -0.3586\*(0.1933) | 0.0153(0.0508) | -1.3077\*\*\*(0.2326) | 0.0540(0.0461) | -0.5176\*\*\*(0.1409) |
| DAirport | - | -0.4124\*\*(0.1756) | - | 0.4438\*\*(0.1878) | - | -0.0475(0.1604) |
| DPort | - | -0.1538(0.1409) | - | 0.2342(0.2171) | - | 0.4548\*\*\*(0.1712) |
| Log(Distance) | - | -0.0772\*\*(0.0360) | - | 0.1901\*\*\*(0.0662) | - | 0.0927\*(0.0484) |
| Latitude | - | 1.4421\*\*\*(0.4271) | - | -2.3134\*\*\*(0.4582) | - | 0.2709(0.3531) |
| PS | - | -0.2247(0.2588) | - | -0.4066(0.3168) | - | 0.1066(0.2232) |
| Intercept | - | 0.8644(2.1521) | - | 17.1070\*\*\*(2.5526) | - | 4.1577\*\*(2.0635) |
|  |  |  |  |  |  |  |
| Year fixed effects | Yes | Yes | Yes | Yes | Yes | Yes |
| R2 | 0.38 | 0.53 | 0.16 | 0.53 | 0.17 | 0.53 |
| Hausman test | 0.50 | - | 7.71 | - | 24.15\*\*\* | - |
| Breusch-Pagan test | 64.36\*\*\* | 73.86\*\*\* | 19.32\*\*\* | 57.58\*\*\* | 9.31 | 32.85\*\*\* |
| F-statistic | 6.65\*\*\* | 10.97\*\*\* | 10.15\*\*\* | 12.07\*\*\* | 8.32\*\*\* | 12.66\*\*\* |
| Number of ids | 84 | 84 | 84 | 84 | 84 | 84 |
| Number observations | 336 | 336 | 336 | 336 | 336 | 336 |

Notes：Standard errors in parenthesis

\*\*\*/\*\*/\* Statistical significance at 1%/5%/10%

**Table A10.** Results of the DID estimates for MPS with matched samples

|  |  |  |  |
| --- | --- | --- | --- |
| Model | Urban land | Agricultural land | Natural land |
| Fixed | Pooled | Fixed | Pooled | Fixed | Pooled |
| **HSR variables** |  |  |  |  |  |  |
| DHSR | -0.0710\*\*(0.0301) | -0.1595\*\*\*(0.0593) | 0.0346(0.0388) | -0.1373(0.1235) | 0.0392(0.0311) | 0.2304\*\*(0.1010) |
| DhasHSR | - | 0.1296(0.1170) | - | -0.0185(0.2257) | - | -0.0174(0.1884) |
| **Controls** |  |  |  |  |  |  |
| Log(TP) | 0.4699(0.6976) | -0.0629(0.1126) | 0.7256\*\*(0.3488) | 0.2493(0.2004) | 0.4121(0.4962) | 0.1191(0.1617) |
| Log(PCGRP) | 0.2035\*\*(0.1025) | 0.4346\*\*(0.1679) | -0.0183(0.0788) | 0.2811(0.2280) | -0.0713(0.081) | -0.0076(0.2181) |
| PSTI | -0.0577(0.2887) | -0.2549(0.8053) | 0.1532(0.3450) | -6.2809\*\*\*(1.5697) | 0.4980(0.3668) | 3.6823\*\*\*(1.2807) |
| Log(ASPCB) | 0.0385\*\*(0.0158) | 0.0010(0.0649) | -0.0129(0.0153) | -0.0470(0.1453) | -0.0168(0.0145) | -0.0601(0.0961) |
| Log(FDI) | -0.0341\*\*\*(0.0100) | -0.0633\*\*(0.0308) | -0.0098(0.0150) | 0.0933(0.0636) | -0.0342\*(0.0175) | 0.0096(0.0510) |
| Log(HD) | 0.1012\*(0.0515) | 0.1139(0.1364) | -0.0174(0.0553) | 0.8651\*\*\*(0.2472) | -0.0506(0.0485) | -1.3042\*\*\*(0.1732) |
| DAirport | - | 0.0331(0.1015) | - | -0.4469\*\*(0.2019) | - | 0.2067(0.1905) |
| DPort | - | -0.0475(0.0932) | - | -0.3143(0.2294) | - | -0.3546\*(0.2076) |
| Log(Distance) | - | -0.0715\*\*\*(0.0267) | - | -0.1383\*(0.0714) | - | 0.0833\*(0.0469) |
| Latitude | - | 0.1451(0.3212) | - | 3.6831\*\*\*(0.5040) | - | -1.9109\*\*\*(0.5076) |
| PS | - | 0.3879\*\*(0.1718) | - | 0.3196(0.3464) | - | -0.7273\*\*\*(0.2351) |
| Intercept | - | -0.7920(1.2166) | - | -10.6049\*\*\*(3.0240) | - | 17.1549\*\*\*(2.3918) |
|  |  |  |  |  |  |  |
| Year fixed effects | Yes | Yes | Yes | Yes | Yes | Yes |
| R2 | 0.38 | 0.39 | 0.18 | 0.52 | 0.16 | 0.51 |
| Hausman test | 10.16 | - | 11.56 | - | 1.64 | - |
| Breusch-Pagan test | 47.85\*\*\* | 118.92\*\*\* | 24.85\*\*\* | 55.29\*\*\* | 24.11\*\*\* | 16.84 |
| F-statistic | 14.58\*\*\* | 11.22\*\*\* | 11.14\*\*\* | 12.93\*\*\* | 7.99\*\*\* | 6.32\*\*\* |
| Number of ids | 84 | 84 | 84 | 84 | 84 | 84 |
| Number observations | 336 | 336 | 336 | 336 | 336 | 336 |

Notes：Standard errors in parenthesis

\*\*\*/\*\*/\* Statistical significance at 1%/5%/10%

**Table A11.** Results of the DID estimates for ED with matched samples

|  |  |  |  |
| --- | --- | --- | --- |
| Model | Urban land | Agricultural land | Natural land |
| Fixed | Pooled | Fixed | Pooled | Fixed | Pooled |
| **HSR variables** |  |  |  |  |  |  |
| DHSR | -0.0060(0.0317) | -0.0463(0.0772) | 0.0001(0.0102) | -0.0287(0.0422) | -0.0089(0.0122) | 0.0764(0.0759) |
| DhasHSR | - | 0.0799(0.1316) | - | 0.0138(0.1006) | - | -0.0437(0.1284) |
| **Controls** |  |  |  |  |  |  |
| Log(TP) | 0.9068\*(0.5195) | -0.1959(0.1533) | -0.1736(0.2632) | 0.0068(0.0767) | -1.0798\*\*\*(0.3452) | -0.0480(0.1056) |
| Log(PCGRP) | -0.0135(0.0667) | 0.1109(0.1577) | -0.0220(0.0286) | -0.2256\*\*(0.1021) | 0.0184(0.0335) | -0.2205(0.1382) |
| PSTI | 0.0697(0.3744) | -1.8652\*(1.1006) | -0.0149(0.1371) | 1.2220\*\*(0.5175) | 0.1128(0.1432) | 2.5494\*\*\*(0.8483) |
| Log(ASPCB) | -0.0074(0.014) | 0.0138(0.0916) | -0.0071(0.0049) | -0.0162(0.0464) | 0.0058(0.0061) | -0.0468(0.0760) |
| Log(FDI) | 0.0333\*\*\*(0.0127) | 0.1671\*\*\*(0.0504) | 0.0083(0.0056) | -0.0715\*\*(0.0338) | 0.0104\*(0.0061) | -0.1255\*\*\*(0.0401) |
| Log(HD) | 0.0710(0.0446) | 0.8995\*\*\*(0.1793) | 0.0010(0.0177) | 0.3727\*\*\*(0.1192) | -0.0086(0.024) | 0.0108(0.1696) |
| DAirport | - | -0.5297\*\*\*(0.1470) | - | 0.0406(0.0897) | - | 0.0991(0.1196) |
| DPort | - | -0.0410(0.1480) | - | 0.0924(0.0807) | - | 0.2797\*(0.1407) |
| Log(Distance) | - | -0.1846\*\*\*(0.0416) | - | -0.0077(0.0241) | - | 0.0395(0.0422) |
| Latitude | - | 1.7329\*\*\*(0.3950) | - | 0.0500(0.2143) | - | -0.6868\*\*(0.2787) |
| PS | - | 0.4437\*(0.2331) | - | 0.2633\*\*(0.1246) | - | 0.3354\*(0.1687) |
| Intercept | - | -9.1085\*\*\*(2.3094) | - | 2.0952\*(1.1454) | - | 6.1026\*\*\*(1.6069) |
|  |  |  |  |  |  |  |
| Year fixed effects | Yes | Yes | Yes | Yes | Yes | Yes |
| R2 | 0.59 | 0.64 | 0.06 | 0.40 | 0.24 | 0.34 |
| Hausman test | 37.96\*\*\* | - | 182.90\*\*\* | - | 44.51\*\*\* | - |
| Breusch-Pagan test | 32.38\*\*\* | 34.17\*\*\* | 55.26\*\*\* | 71.01\*\*\* | 27.04\*\*\* | 53.02\*\*\* |
| F-statistic | 19.66\*\*\* | 15.10\*\*\* | 3.31\*\*\* | 2.72\*\*\* | 2.91\*\*\* | 4.26\*\*\* |
| Number of ids | 84 | 84 | 84 | 84 | 84 | 84 |
| Number observations | 336 | 336 | 336 | 336 | 336 | 336 |

Notes：Standard errors in parenthesis

\*\*\*/\*\*/\* Statistical significance at 1%/5%/10%

**Table A12.** Results of the DID estimates for AWMPFD with matched samples

|  |  |  |  |
| --- | --- | --- | --- |
| Model | Urban land | Agricultural land | Natural land |
| Fixed | Pooled | Fixed | Pooled | Fixed | Pooled |
| **HSR variables** |  |  |  |  |  |  |
| DHSR | -0.0005(0.0019) | 0.0010(0.0024) | 0.0023\*(0.0014) | 0.0011(0.0033) | -0.0019(0.0012) | 0.0021(0.0051) |
| DhasHSR | - | -0.0013(0.0031) | - | -0.0055(0.0063) | - | 0.0019(0.0077) |
| **Controls** |  |  |  |  |  |  |
| Log(TP) | 0.0130(0.0226) | -0.0031(0.0032) | 0.0039(0.0200) | 0.0044(0.0054) | -0.0393\*\*\*(0.0130) | 0.0136\*(0.0075) |
| Log(PCGRP) | 0.0016(0.0041) | 0.0071\*(0.0042) | -0.0081\*\*(0.0037) | -0.0121\*(0.0073) | -0.0013(0.0028) | -0.0243\*\*\*(0.0084) |
| PSTI | -0.0333\*\*(0.0161) | 0.0145(0.0260) | -0.0170(0.0130) | 0.0025(0.0376) | 0.0160(0.0199) | 0.1930\*\*\*(0.0614) |
| Log(ASPCB) | 0.0004(0.0008) | 0.0068\*\*\*(0.0020) | -0.0024\*\*\*(0.0008) | 0.0015(0.0039) | -0.001(0.0007) | -0.0068(0.0048) |
| Log(FDI) | -0.0009\*(0.0005) | -0.0006(0.0009) | 0.0011\*(0.0006) | 0.0020(0.0019) | 0.0006(0.0005) | -0.0081\*\*\*(0.0025) |
| Log(HD) | 0.0029(0.0024) | 0.0127\*\*\*(0.0032) | -0.0021(0.0024) | 0.0136\*\*(0.0061) | -0.0011(0.0017) | -0.0189\*\*(0.0092) |
| DAirport | - | 0.0005(0.0032) | - | -0.0075(0.0063) | - | 0.0191\*\*(0.0078) |
| DPort | - | 0.0099\*\*(0.0040) | - | 0.0068(0.0059) | - | -0.0006(0.0094) |
| Log(Distance) | - | 0.0058\*\*\*(0.0012) | - | -0.0015(0.0015) | - | 0.0019(0.0023) |
| Latitude | - | -0.0258\*\*\*(0.0089) | - | 0.0462\*\*\*(0.0145) | - | -0.0479\*\*\*(0.0171) |
| PS | - | 0.0031(0.0054) | - | 0.0036(0.0083) | - | 0.0066(0.0119) |
| Intercept | - | 0.1152\*\*(0.0500) | - | 0.1660\*\*(0.0691) | - | 0.7139\*\*\*(0.1100) |
|  |  |  |  |  |  |  |
| Year fixed effects | Yes | Yes | Yes | Yes | Yes | Yes |
| R2 | 0.26 | 0.50 | 0.12 | 0.26 | 0.13 | 0.41 |
| Hausman test | 1805.20\*\*\* | - | 13.50\* | - | 7.21 | - |
| Breusch-Pagan test | 25.15\*\*\* | 43.57\*\*\* | 8.14 | 31.26\*\*\* | 11.18 | 38.54\*\*\* |
| F-statistic | 5.39\*\*\* | 13.73\*\*\* | 5.24\*\*\* | 3.10\*\*\* | 3.55\*\*\* | 4.87\*\*\* |
| Number of ids | 84 | 84 | 84 | 84 | 84 | 84 |
| Number observations | 336 | 336 | 336 | 336 | 336 | 336 |

Notes：Standard errors in parenthesis

\*\*\*/\*\*/\* Statistical significance at 1%/5%/10%

**Table A13.** Results of the DID estimates for MSI with matched samples

|  |  |  |  |
| --- | --- | --- | --- |
| Model | Urban land | Agricultural land | Natural land |
| Fixed | Pooled | Fixed | Pooled | Fixed | Pooled |
| **HSR variables** |  |  |  |  |  |  |
| DHSR | 0.0028(0.0060) | -0.0030(0.0095) | 0.0207\*(0.0120) | 0.0315(0.0218) | 0.0083(0.0058) | 0.0103(0.0127) |
| DhasHSR | - | -0.0048(0.0156) | - | 0.0134(0.0295) | - | 0.0014(0.0159) |
| **Controls** |  |  |  |  |  |  |
| Log(TP) | 0.1856\*(0.0972) | -0.0136(0.0152) | 0.0000(0.1098) | 0.0359\*(0.0199) | -0.1377(0.0906) | 0.0139(0.0150) |
| Log(PCGRP) | -0.0073(0.016) | 0.0490\*\*\*(0.0168) | -0.0087(0.0196) | -0.0437(0.0263) | -0.0128(0.0184) | -0.0169(0.0196) |
| PSTI | -0.1062(0.1098) | -0.0767(0.1196) | -0.0096(0.1917) | 0.4108\*(0.2257) | -0.0010(0.0935) | 0.3174\*\*(0.1451) |
| Log(ASPCB) | -0.0012(0.0027) | 0.0137(0.0100) | -0.0057(0.0046) | -0.0001(0.0139) | 0.0019(0.0028) | -0.0206(0.0140) |
| Log(FDI) | -0.0022(0.0018) | -0.0067(0.0047) | -0.0025(0.0037) | -0.0214\*(0.0114) | -0.0014(0.0031) | -0.0192\*\*\*(0.0072) |
| Log(HD) | 0.0019(0.009) | 0.0411\*\*(0.0193) | -0.0137(0.0150) | -0.0218(0.0245) | -0.0191(0.0119) | 0.0227(0.0166) |
| DAirport | - | 0.0042(0.0157) | - | 0.0170(0.0331) | - | 0.0126(0.0162) |
| DPort | - | 0.0354\*\*(0.0167) | - | -0.0346(0.0283) | - | -0.0238(0.0217) |
| Log(Distance) | - | 0.0169\*\*\*(0.0043) | - | -0.0018(0.0069) | - | 0.0125\*\*(0.0049) |
| Latitude | - | -0.0659(0.0414) | - | -0.0129(0.0556) | - | 0.0967\*\*(0.0398) |
| PS | - | 0.0014(0.0287) | - | 0.0018(0.0346) | - | 0.0335(0.0265) |
| Intercept | - | -0.1995(0.2221) | - | 0.8715\*\*\*(0.3107) | - | 0.0979(0.2428) |
|  |  |  |  |  |  |  |
| Year fixed effects | Yes | Yes | Yes | Yes | Yes | Yes |
| R2 | 0.24 | 0.30 | 0.17 | 0.20 | 0.23 | 0.40 |
| Hausman test | 27.70\*\*\* | - | 223.15\*\*\* | - | 23.43\*\*\* | - |
| Breusch-Pagan test | 24.61\*\*\* | 52.88\*\* | 79.65\*\*\* | 116.50\*\*\* | 16.39\*\* | 54.98\*\*\* |
| F-statistic | 5.85\*\*\* | 5.12\*\*\* | 15.06\*\*\* | 8.70\*\*\* | 14.70\*\*\* | 8.43\*\*\* |
| Number of ids | 84 | 84 | 84 | 84 | 84 | 84 |
| Number observations | 336 | 336 | 336 | 336 | 336 | 336 |

Notes：Standard errors in parenthesis

\*\*\*/\*\*/\* Statistical significance at 1%/5%/10%

**Table A14.** Results of the SDID estimates for CA with whole samples

|  |  |  |  |
| --- | --- | --- | --- |
| Model | Urban land | Agricultural land | Natural land |
| **HSR variables** |  |  |  |
| DHSR | -0.0334(0.0240) | -0.0182\*\*\*(0.0062) | -0.0073(0.0064) |
| **Controls** |  |  |  |
| Log(TP) | 0.3090(0.2756) | -0.0593(0.0532) | -0.3388(0.2282) |
| Log(PCGRP) | 0.0095(0.0414) | -0.0002(0.0082) | 0.0052(0.0076) |
| PSTI | -0.5089(0.4173) | 0.1278(0.0999) | 0.1140(0.0730) |
| Log(ASPCB) | 0.0211\*(0.0120) | 0.0001(0.0021) | 0.0024(0.0019) |
| Log(FDI) | 0.0131(0.0091) | 0.0026(0.0021) | 0.0010(0.0023) |
| Log(HD) | -0.0079(0.0222) | -0.0082(0.0062) | 0.0010(0.0073) |
| ρ | 0.9168\*\*\*(0.0212) | 0.7492\*\*\*(0.0798) | 0.7929\*\*\*(0.0846) |
| Direct effect of DHSR | -0.0353(0.0267) | -0.0184\*\*\*(0.0065) | -0.0069(0.0123) |
| Indirect effect of DHSR | -0.3860(0.3368) | -0.0598(0.0369) | 0.0315(1.5107) |
| Total effect of DHSR | -0.4213(0.3609) | -0.0783\*(0.0404) | 0.0246(1.5211) |
|  |  |  |  |
| Year fixed effects | Yes | Yes | Yes |
| Likehood | 307.71 | 1017.64 | 953.38 |
| AIC | -597.41 | -2017.27 | -1888.75 |
| BIC | -560.49 | -1980.35 | -1851.83 |
| Number of ids | 149 | 149 | 149 |
| Number observations | 447 | 447 | 447 |

Notes：Standard errors in parenthesis

\*\*\*/\*\*/\* Statistical significance at 1%/5%/10%

**Table A15.** Results of the SDID estimates for NP with whole samples

|  |  |  |  |
| --- | --- | --- | --- |
| Model | Urban land | Agricultural land | Natural land |
| **HSR variables** |  |  |  |
| DHSR | -0.0006(0.0300) | -0.0373(0.0334) | -0.0757\*(0.0407) |
| **Controls** |  |  |  |
| Log(TP) | 0.0039(0.5902) | -0.7402\*\*(0.3174) | -0.5419(0.5667) |
| Log(PCGRP) | -0.0230(0.0410) | 0.0297(0.0423) | 0.0260(0.0421) |
| PSTI | -0.2248(0.4049) | -0.3119(0.2812) | -0.3059(0.3290) |
| Log(ASPCB) | 0.0043(0.0109) | 0.0111(0.0107) | 0.0241\*\*(0.0110) |
| Log(FDI) | 0.0288\*\*\*(0.0091) | 0.0170\*(0.0098) | 0.0283\*\*\*(0.0109) |
| Log(HD) | 0.0001(0.0235) | 0.0035(0.0334) | -0.0284(0.0306) |
| ρ | 0.9229\*\*\*(0.0159) | 0.8083\*\*\*(0.0495) | 0.7201\*\*\*(0.0884) |
| Direct effect of DHSR | 0.0006(0.0335) | -0.0373(0.0355) | -0.0759\*(0.0429) |
| Indirect effect of DHSR | 0.0264(0.3938) | -0.1729(0.1823) | -0.2424(0.4336) |
| Total effect of DHSR | 0.0271(0.4265) | -0.2103(0.2147) | -0.3183(0.4520) |
|  |  |  |  |
| Year fixed effects | Yes | Yes | Yes |
| Likehood | 317.66 | 235.51 | 256.15 |
| AIC | -617.33 | -453.01 | -494.29 |
| BIC | -580.4 | -416.09 | -457.37 |
| Number of ids | 149 | 149 | 149 |
| Number observations | 447 | 447 | 447 |

Notes：Standard errors in parenthesis

\*\*\*/\*\*/\* Statistical significance at 1%/5%/10%

**Table A16.** Results of the SDID estimates for MPS with whole samples

|  |  |  |  |
| --- | --- | --- | --- |
| Model | Urban land | Agricultural land | Natural land |
| **HSR variables** |  |  |  |
| DHSR | -0.0322(0.0282) | 0.0196(0.0334) | 0.0677\*(0.0388) |
| **Controls** |  |  |  |
| Log(TP) | 0.3187(0.5061) | 0.6808\*\*(0.3347) | 0.2013(0.3927) |
| Log(PCGRP) | 0.0356(0.0365) | -0.0273(0.0458) | -0.0238(0.0434) |
| PSTI | -0.2844(0.2979) | 0.4343(0.3018) | 0.4289(0.3120) |
| Log(ASPCB) | 0.0178(0.0109) | -0.0107(0.0107) | -0.0220\*\*(0.0106) |
| Log(FDI) | -0.0160\*\*(0.0067) | -0.0143(0.0106) | -0.0274\*\*(0.0113) |
| Log(HD) | -0.0085(0.0231) | -0.0124(0.0355) | 0.0306(0.0316) |
| ρ | 0.8888\*\*\*(0.0283) | 0.8162\*\*\*(0.0513) | 0.6866\*\*\*(0.1056) |
| Direct effect of DHSR | -0.0331(0.0308) | 0.0217(0.0357) | 0.0705\*(0.0406) |
| Indirect effect of DHSR | -0.2669(0.2900) | 0.1260(0.2280) | 0.1920(0.1937) |
| Total effect of DHSR | -0.2999(0.3170) | 0.1477(0.2588) | 0.2625(0.2204) |
|  |  |  |  |
| Year fixed effects | Yes | Yes | Yes |
| Likehood | 342.25 | 215.72 | 256.88 |
| AIC | -666.5 | -413.44 | -495.75 |
| BIC | -629.58 | -376.52 | -458.83 |
| Number of ids | 149 | 149 | 149 |
| Number observations | 447 | 447 | 447 |

Notes：Standard errors in parenthesis

\*\*\*/\*\*/\* Statistical significance at 1%/5%/10%

**Table A17.** Results of the SDID estimates for ED with whole samples

|  |  |  |  |
| --- | --- | --- | --- |
| Model | Urban land | Agricultural land | Natural land |
| **HSR variables** |  |  |  |
| DHSR | -0.0221(0.0267) | -0.0001(0.0103) | -0.0157(0.0113) |
| **Controls** |  |  |  |
| Log(TP) | 0.2384(0.4892) | -0.1291(0.1841) | -0.6678\*\*(0.3061) |
| Log(PCGRP) | -0.0051(0.0398) | -0.0041(0.0133) | 0.0168(0.0154) |
| PSTI | -0.5562(0.4148) | 0.0032(0.1003) | 0.1067(0.1134) |
| Log(ASPCB) | 0.0108(0.0123) | -0.0000(0.0030) | 0.0068\*(0.0037) |
| Log(FDI) | 0.0189\*\*(0.0090) | 0.0061\*(0.0031) | 0.0088\*\*(0.0038) |
| Log(HD) | 0.0016(0.0240) | 0.0037(0.0092) | -0.0075(0.0119) |
| ρ | 0.9287\*\*\*(0.0167) | 0.8647\*\*\*(0.0684) | 0.9031\*\*\*(0.0321) |
| Direct effect of DHSR | -0.0231(0.0300) | -0.0004(0.0164) | -0.0164(0.0124) |
| Indirect effect of DHSR | -0.2742(0.3794) | -0.1113(1.7755) | -0.1607(0.1461) |
| Total effect of DHSR | -0.2974(0.4082) | -0.1117(1.7880) | -0.1772(0.1563) |
|  |  |  |  |
| Year fixed effects | Yes | Yes | Yes |
| Likehood | 304.73 | 780.83 | 691.14 |
| AIC | -591.47 | -1543.65 | -1364.28 |
| BIC | -554.54 | -1506.73 | -1327.36 |
| Number of ids | 149 | 149 | 149 |
| Number observations | 447 | 447 | 447 |

Notes：Standard errors in parenthesis

\*\*\*/\*\*/\* Statistical significance at 1%/5%/10%

**Table A18.** Results of the SDID estimates for AWMPFD with whole samples

|  |  |  |  |
| --- | --- | --- | --- |
| Model | Urban land | Agricultural land | Natural land |
| **HSR variables** |  |  |  |
| DHSR | -0.0005(0.0016) | 0.0015(0.0013) | -0.0018\*(0.0010) |
| **Controls** |  |  |  |
| Log(TP) | 0.0001(0.0159) | 0.0206(0.0137) | -0.0366\*\*\*(0.0115) |
| Log(PCGRP) | 0.0017(0.0017) | -0.0039\*\*(0.0016) | 0.0012(0.0012) |
| PSTI | -0.0488\*\*\*(0.0140) | 0.0097(0.0125) | 0.0086(0.0146) |
| Log(ASPCB) | 0.0008(0.0007) | -0.0009\*(0.0005) | -0.0003(0.0005) |
| Log(FDI) | -0.0004(0.0003) | 0.0005(0.0004) | 0.0004(0.0003) |
| Log(HD) | 0.0002(0.0010) | 0.0009(0.0012) | 0.0006(0.0008) |
| ρ | 0.9402\*\*\*(0.0080) | 0.3233(0.2313) | 0.8943\*\*\*(0.0415) |
| Direct effect of DHSR | -0.0005(0.0018) | 0.0016(0.0014) | -0.0018\*(0.0011) |
| Indirect effect of DHSR | -0.0064(0.0259) | 0.0014(0.0037) | -0.0175(0.0422) |
| Total effect of DHSR | -0.0069(0.0277) | 0.0030(0.0044) | -0.0194(0.0427) |
|  |  |  |  |
| Year fixed effects | Yes | Yes | Yes |
| Likehood | 1645.99 | 1721.94 | 1780.29 |
| AIC | -3273.98 | -3425.88 | -3542.59 |
| BIC | -3237.05 | -3388.96 | -3505.66 |
| Number of ids | 149 | 149 | 149 |
| Number observations | 447 | 447 | 447 |

Notes：Standard errors in parenthesis

\*\*\*/\*\*/\* Statistical significance at 1%/5%/10%

**Table A19.** Results of the SDID estimates for MSI with whole samples

|  |  |  |  |
| --- | --- | --- | --- |
| Model | Urban land | Agricultural land | Natural land |
| **HSR variables** |  |  |  |
| DHSR | -0.0011(0.0053) | 0.0203\*\*(0.0094) | 0.0141\*\*(0.0056) |
| **Controls** |  |  |  |
| Log(TP) | 0.0973(0.0786) | 0.0017(0.0879) | -0.0655(0.0572) |
| Log(PCGRP) | 0.0032(0.0066) | -0.0011(0.0090) | -0.0017(0.0062) |
| PSTI | -0.1541\*(0.0917) | 0.0090(0.1298) | 0.0207(0.0735) |
| Log(ASPCB) | 0.0013(0.0026) | -0.0028(0.0031) | 0.0015(0.0021) |
| Log(FDI) | -0.0016(0.0012) | -0.0024(0.0023) | -0.0014(0.0018) |
| Log(HD) | -0.0009(0.0045) | 0.0030(0.0076) | -0.0006(0.0051) |
| ρ | 0.9394\*\*\*(0.0102) | 0.9030\*\*\*(0.0241) | 0.9056\*\*\*(0.0200) |
| Direct effect of DHSR | -0.0010(0.0061) | 0.0222\*\*(0.0105) | 0.0153\*\*(0.0061) |
| Indirect effect of DHSR | -0.0118(0.0868) | 0.2163(0.1416) | 0.1363\*\*\*(0.0526) |
| Total effect of DHSR | -0.0128(0.0928) | 0.2386(0.1500) | 0.1516\*\*\*(0.0578) |
|  |  |  |  |
| Year fixed effects | Yes | Yes | Yes |
| Likehood | 1046.63 | 894.95 | 1050.96 |
| AIC | -2075.25 | -1771.89 | -2083.92 |
| BIC | -2038.33 | -1734.97 | -2046.99 |
| Number of ids | 149 | 149 | 149 |
| Number observations | 447 | 447 | 447 |

Notes：Standard errors in parenthesis

\*\*\*/\*\*/\* Statistical significance at 1%/5%/10%

**Table A20.** Results of the SDID estimates for CA with matched samples

|  |  |  |  |
| --- | --- | --- | --- |
| Model | Urban land | Agricultural land | Natural land |
| **HSR variables** |  |  |  |
| DHSR | -0.0319(0.0274) | -0.0120\*\*(0.0053) | 0.0004(0.0062) |
| **Controls** |  |  |  |
| Log(TP) | 0.4831\*(0.2936) | -0.0911(0.0649) | -0.5309\*(0.2755) |
| Log(PCGRP) | 0.0043(0.0506) | 0.0028(0.0094) | -0.0027(0.0081) |
| PSTI | -0.0583(0.4255) | -0.0005(0.0966) | 0.1617\*(0.0866) |
| Log(ASPCB) | 0.0140(0.0131) | 0.0004(0.0018) | 0.0044\*(0.0026) |
| Log(FDI) | 0.0215\*(0.0125) | 0.0037(0.0025) | -0.0002(0.0035) |
| Log(HD) | -0.0099(0.0296) | -0.0062(0.0058) | 0.0106(0.0121) |
| ρ | 0.8570\*\*\*(0.0420) | 0.6703\*\*\*(0.0829) | 0.3964\*\*(0.1922) |
| Direct effect of DHSR | -0.0336(0.0306) | -0.0122\*\*(0.0056) | 0.0007(0.0064) |
| Indirect effect of DHSR | -0.2047(0.2220) | -0.0252\*(0.0139) | 0.0032(0.0176) |
| Total effect of DHSR | -0.2383(0.2492) | -0.0374\*\*(0.0183) | 0.0039(0.0213) |
|  |  |  |  |
| Year fixed effects | Yes | Yes | Yes |
| Likehood | 192.85 | 576.37 | 505.75 |
| AIC | -367.69 | -1134.74 | -993.49 |
| BIC | -335.93 | -1102.98 | -961.73 |
| Number of ids | 84 | 84 | 84 |
| Number observations | 252 | 252 | 252 |

Notes：Standard errors in parenthesis

\*\*\*/\*\*/\* Statistical significance at 1%/5%/10%

**Table A21.** Results of the SDID estimates for NP with matched samples

|  |  |  |  |
| --- | --- | --- | --- |
| Model | Urban land | Agricultural land | Natural land |
| **HSR variables** |  |  |  |
| DHSR | 0.0275(0.0292) | -0.0401(0.0310) | -0.0237(0.0282) |
| **Controls** |  |  |  |
| Log(TP) | 0.4208(0.6873) | -0.7130\*\*(0.3151) | -1.0907(0.6650) |
| Log(PCGRP) | -0.0781\*(0.0467) | 0.0505(0.0404) | 0.0431(0.0450) |
| PSTI | 0.2378(0.4091) | -0.1555(0.3341) | -0.4228(0.3694) |
| Log(ASPCB) | 0.0017(0.0122) | 0.0140(0.0129) | 0.0227\*\*(0.0101) |
| Log(FDI) | 0.0414\*\*\*(0.0108) | 0.0144(0.0140) | 0.0339\*\*(0.0153) |
| Log(HD) | -0.0081(0.0278) | -0.0184(0.0379) | -0.0082(0.0337) |
| ρ | 0.9036\*\*\*(0.0216) | 0.7435\*\*\*(0.0583) | 0.5457\*\*\*(0.1292) |
| Direct effect of DHSR | 0.0324(0.0339) | -0.0407(0.0333) | -0.0232(0.0297) |
| Indirect effect of DHSR | 0.2953(0.3363) | -0.1324(0.1263) | -0.0444(0.1835) |
| Total effect of DHSR | 0.3277(0.3682) | -0.1731(0.1575) | -0.0676(0.1964) |
|  |  |  |  |
| Year fixed effects | Yes | Yes | Yes |
| Likehood | 192.30 | 142.40 | 173.36 |
| AIC | -366.61 | -266.81 | -328.72 |
| BIC | -334.84 | -235.04 | -296.96 |
| Number of ids | 84 | 84 | 84 |
| Number observations | 252 | 252 | 252 |

Notes：Standard errors in parenthesis

\*\*\*/\*\*/\* Statistical significance at 1%/5%/10%

**Table A22.** Results of the SDID estimates for MPS with matched samples

|  |  |  |  |
| --- | --- | --- | --- |
| Model | Urban land | Agricultural land | Natural land |
| **HSR variables** |  |  |  |
| DHSR | -0.0599\*\*(0.0284) | 0.0291(0.0325) | 0.0244(0.0287) |
| **Controls** |  |  |  |
| Log(TP) | 0.0651(0.5661) | 0.6170\*(0.3379) | 0.5616(0.4382) |
| Log(PCGRP) | 0.0810(0.0544) | -0.0426(0.0437) | -0.0445(0.0451) |
| PSTI | -0.2883(0.2832) | 0.1498(0.3444) | 0.5816\*(0.3489) |
| Log(ASPCB) | 0.0123(0.0135) | -0.0132(0.0128) | -0.0183\*\*(0.0093) |
| Log(FDI) | -0.0209\*\*(0.0088) | -0.0107(0.0149) | -0.0340\*\*(0.0163) |
| Log(HD) | 0.0006(0.0289) | 0.0108(0.0399) | 0.0183(0.0342) |
| ρ | 0.8230\*\*\*(0.0508) | 0.7650\*\*\*(0.0611) | 0.5411\*\*\*(0.1444) |
| Direct effect of DHSR | -0.0626\*\*(0.0309) | 0.0321(0.0354) | 0.0261(0.0301) |
| Indirect effect of DHSR | -0.2860(0.1820) | 0.1382(0.2115) | 0.0468(0.0718) |
| Total effect of DHSR | -0.3486\*(0.2064) | 0.1703(0.2399) | 0.0729(0.0960) |
|  |  |  |  |
| Year fixed effects | Yes | Yes | Yes |
| Likehood | 183.48 | 128.79 | 168.57 |
| AIC | -348.96 | -239.57 | -319.13 |
| BIC | -317.19 | -207.81 | -287.37 |
| Number of ids | 84 | 84 | 84 |
| Number observations | 252 | 252 | 252 |

Notes：Standard errors in parenthesis

\*\*\*/\*\*/\* Statistical significance at 1%/5%/10%

**Table A23.** Results of the SDID estimates for ED with matched samples

|  |  |  |  |
| --- | --- | --- | --- |
| Model | Urban land | Agricultural land | Natural land |
| **HSR variables** |  |  |  |
| DHSR | 0.0043(0.0268) | 0.0009(0.0083) | -0.0092(0.0097) |
| **Controls** |  |  |  |
| Log(TP) | 0.7134(0.5388) | -0.0481(0.2262) | -0.9609\*\*\*(0.3594) |
| Log(PCGRP) | -0.0534(0.0387) | -0.0068(0.0153) | 0.0168(0.0178) |
| PSTI | -0.0167(0.3512) | 0.0169(0.1176) | 0.1391(0.1312) |
| Log(ASPCB) | 0.0042(0.0113) | -0.0008(0.0034) | 0.0082\*(0.0045) |
| Log(FDI) | 0.0279\*\*(0.0111) | 0.0063(0.0047) | 0.0094\*(0.0055) |
| Log(HD) | 0.0025(0.0289) | 0.0058(0.0114) | 0.0060(0.0177) |
| ρ | 0.8912\*\*\*(0.0293) | 0.7854\*\*\*(0.1034) | 0.7237\*\*\*(0.1212) |
| Direct effect of DHSR | 0.0060(0.0307) | 0.0014(0.0098) | -0.0093(0.0105) |
| Indirect effect of DHSR | 0.0530(0.2669) | 0.0142(0.3187) | -0.0330(0.1168) |
| Total effect of DHSR | 0.0590(0.2958) | 0.0155(0.3236) | -0.0423(0.1214) |
|  |  |  |  |
| Year fixed effects | Yes | Yes | Yes |
| Likehood | 215.82 | 438.76 | 381.92 |
| AIC | -413.63 | -859.53 | -745.84 |
| BIC | -381.87 | -827.76 | -714.08 |
| Number of ids | 84 | 84 | 84 |
| Number observations | 252 | 252 | 252 |

Notes：Standard errors in parenthesis

\*\*\*/\*\*/\* Statistical significance at 1%/5%/10%

**Table A24.** Results of the SDID estimates for AWMPFD with matched samples

|  |  |  |  |
| --- | --- | --- | --- |
| Model | Urban land | Agricultural land | Natural land |
| **HSR variables** |  |  |  |
| DHSR | -0.0009(0.0015) | 0.0019(0.0013) | -0.0018\*(0.0010) |
| **Controls** |  |  |  |
| Log(TP) | 0.0136(0.0207) | 0.0137(0.0190) | -0.0292\*\*(0.0135) |
| Log(PCGRP) | 0.0006(0.0021) | -0.0031\*(0.0018) | 0.0007(0.0014) |
| PSTI | -0.0349\*\*(0.0139) | -0.0095(0.0131) | 0.0202(0.0181) |
| Log(ASPCB) | 0.0006(0.0008) | -0.0013\*\*(0.0006) | -0.0005(0.0006) |
| Log(FDI) | -0.0007\*(0.0004) | 0.0009(0.0006) | 0.0004(0.0005) |
| Log(HD) | 0.0015(0.0013) | 0.0014(0.0015) | 0.0001(0.0011) |
| ρ | 0.9001\*\*\*(0.0204) | 0.4775\*\*\*(0.1777) | 0.6088\*\*\*(0.1183) |
| Direct effect of DHSR | -0.0009(0.0017) | 0.0020(0.0014) | -0.0018\*(0.0011) |
| Indirect effect of DHSR | -0.0081(0.0147) | 0.0025(0.0035) | -0.0029(0.0021) |
| Total effect of DHSR | -0.0090(0.0164) | 0.0045(0.0044) | -0.0047(0.0030) |
|  |  |  |  |
| Year fixed effects | Yes | Yes | Yes |
| Likehood | 938.78 | 944.45 | 1008.22 |
| AIC | -1859.56 | -1870.89 | -1998.43 |
| BIC | -1827.80 | -1839.13 | -1966.67 |
| Number of ids | 84 | 84 | 84 |
| Number observations | 252 | 252 | 252 |

Notes：Standard errors in parenthesis

\*\*\*/\*\*/\* Statistical significance at 1%/5%/10%

**Table A25.** Results of the SDID estimates for MSI with matched samples

|  |  |  |  |
| --- | --- | --- | --- |
| Model | Urban land | Agricultural land | Natural land |
| **HSR variables** |  |  |  |
| DHSR | 0.0016(0.0051) | 0.0175\*(0.0102) | 0.0056(0.0050) |
| **Controls** |  |  |  |
| Log(TP) | 0.1925\*\*(0.0900) | 0.0803(0.0918) | -0.0633(0.0750) |
| Log(PCGRP) | -0.0038(0.0072) | -0.0090(0.0113) | -0.0022(0.0076) |
| PSTI | -0.0845(0.1004) | 0.0293(0.1854) | 0.0128(0.0922) |
| Log(ASPCB) | -0.0005(0.0024) | -0.0046(0.0044) | 0.0019(0.0024) |
| Log(FDI) | -0.0019(0.0016) | -0.0029(0.0037) | -0.0012(0.0029) |
| Log(HD) | 0.0023(0.0050) | 0.0063(0.0109) | -0.0005(0.0069) |
| ρ | 0.8642\*\*\*(0.0266) | 0.8017\*\*\*(0.0642) | 0.8588\*\*\*(0.0305) |
| Direct effect of DHSR | 0.0019(0.0057) | 0.0192(0.0118) | 0.0063(0.0056) |
| Indirect effect of DHSR | 0.0119(0.0354) | 0.1064(0.2229) | 0.0391(0.0378) |
| Total effect of DHSR | 0.0138(0.0409) | 0.1256(0.2298) | 0.0455(0.0430) |
|  |  |  |  |
| Year fixed effects | Yes | Yes | Yes |
| Likehood | 646.19 | 481.75 | 594.39 |
| AIC | -1274.37 | -945.50 | -1170.78 |
| BIC | -1242.61 | -913.74 | -1139.01 |
| Number of ids | 84 | 84 | 84 |
| Number observations | 252 | 252 | 252 |

Notes：Standard errors in parenthesis

\*\*\*/\*\*/\* Statistical significance at 1%/5%/10%