Time Varying BC95-JTT-HN-long period

Long period

SFACD BC95-JTT-HN Elasticities (long period)

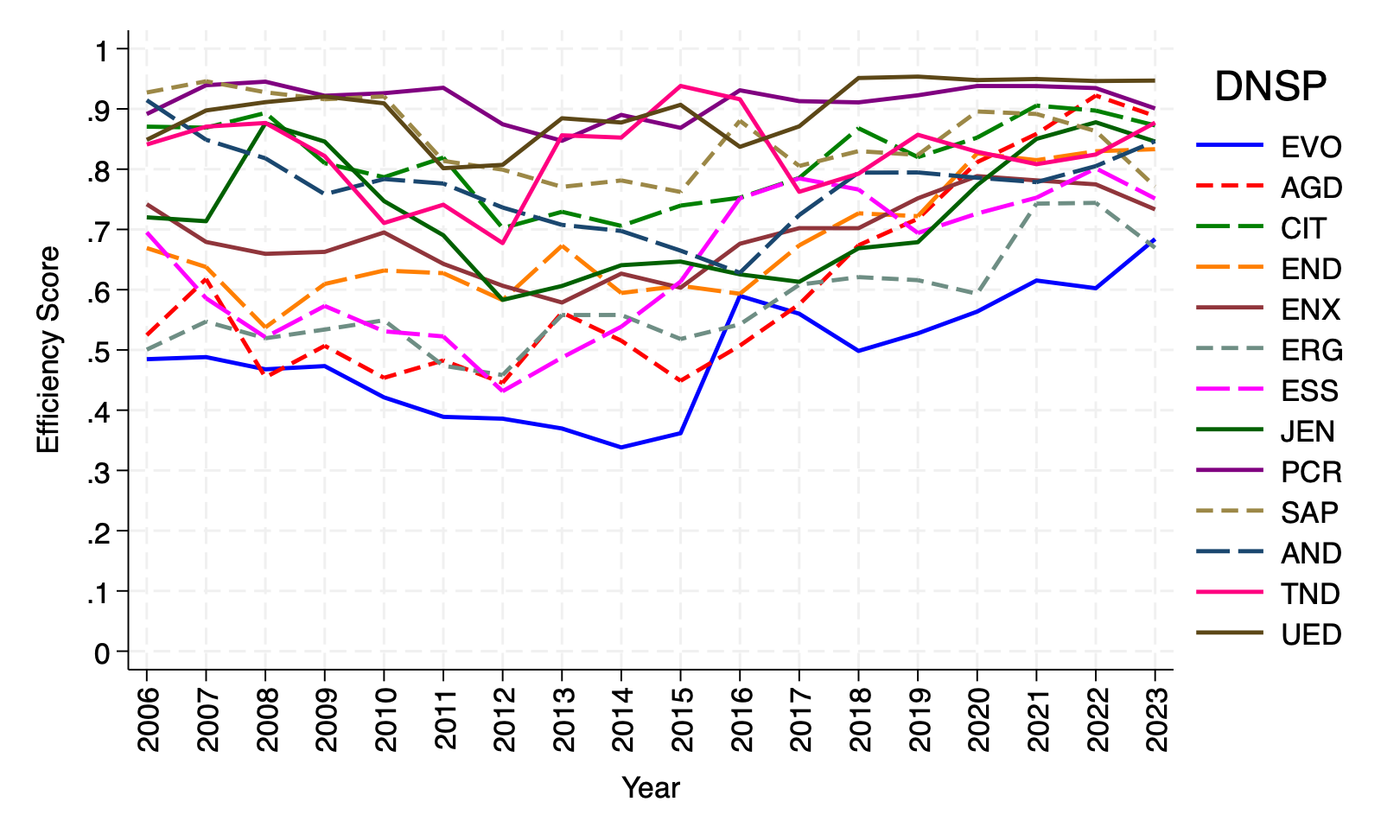
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | ely1 | ely2 | ely3 | elY |
| Country code |  |  |  |  |
| 1.Aust | 0.496 | 0.113 | 0.381 | 0.990 |
| 2.NZ | 0.496 | 0.113 | 0.381 | 0.990 |
| 3.Ontario | 0.496 | 0.113 | 0.381 | 0.990 |
| Total | 0.496 | 0.113 | 0.381 | 0.990 |

SFACD BC95-JTT-HN Efficiency Scores (long period)

|  |  |  |  |
| --- | --- | --- | --- |
|  | Cost efficiency via E(exp(-u)|e) | 95% lower bound of E(exp(-u)|e) | 95% upper bound of E(exp(-u)|e) |
| Country code |  |  |  |
| 1.Aust | 0.729 | 0.605 | 0.853 |
| 2.NZ | 0.739 | 0.613 | 0.861 |
| 3.Ontario | 0.912 | 0.791 | 0.990 |
| Total | 0.819 | 0.696 | 0.920 |

|  |  |  |  |
| --- | --- | --- | --- |
|  | Cost efficiency via E(exp(-u)|e) | 95% lower bound of E(exp(-u)|e) | 95% upper bound of E(exp(-u)|e) |
| dnsp |  |  |  |
| 1 | 0.490 | 0.400 | 0.594 |
| 2 | 0.609 | 0.501 | 0.723 |
| 3 | 0.816 | 0.674 | 0.951 |
| 4 | 0.677 | 0.554 | 0.815 |
| 5 | 0.689 | 0.563 | 0.834 |
| 6 | 0.575 | 0.469 | 0.698 |
| 7 | 0.640 | 0.523 | 0.775 |
| 8 | 0.722 | 0.593 | 0.860 |
| 9 | 0.913 | 0.783 | 0.995 |
| 10 | 0.851 | 0.713 | 0.972 |
| 11 | 0.770 | 0.632 | 0.917 |
| 12 | 0.825 | 0.684 | 0.957 |
| 13 | 0.898 | 0.769 | 0.990 |
| Total | 0.729 | 0.605 | 0.853 |

SFACD BC95-JTT-HN Efficiency Scores (long period)



SFATLG BC95-JTT-HN Elasticities (long period)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | ely1 | ely2 | ely3 | elY |
| Country code |  |  |  |  |
| 1.Aust | 0.189 | 0.167 | 0.630 | 0.985 |
| 2.NZ | 0.712 | 0.073 | 0.161 | 0.946 |
| 3.Ontario | 0.391 | 0.095 | 0.485 | 0.971 |
| Total | 0.448 | 0.103 | 0.415 | 0.967 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | ely1 | ely2 | ely3 | elY |
| dnsp |  |  |  |  |
| 1 | 0.346 | 0.126 | 0.487 | 0.959 |
| 2 | -0.035 | 0.207 | 0.814 | 0.985 |
| 3 | 0.161 | 0.153 | 0.645 | 0.960 |
| 4 | 0.014 | 0.186 | 0.809 | 1.010 |
| 5 | 0.030 | 0.198 | 0.763 | 0.991 |
| 6 | 0.098 | 0.167 | 0.806 | 1.071 |
| 7 | 0.235 | 0.169 | 0.622 | 1.026 |
| 8 | 0.378 | 0.146 | 0.386 | 0.910 |
| 9 | 0.233 | 0.169 | 0.591 | 0.993 |
| 10 | 0.152 | 0.174 | 0.690 | 1.017 |
| 11 | 0.324 | 0.165 | 0.463 | 0.952 |
| 12 | 0.282 | 0.137 | 0.588 | 1.007 |
| 13 | 0.236 | 0.171 | 0.522 | 0.929 |
| Total | 0.189 | 0.167 | 0.630 | 0.985 |

SFATLG BC95-JTT-HN Monotonicity Violations (long period)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | mon1 | mon2 | mon3 | montot |
| Country code |  |  |  |  |
| 1.Aust | 9.8 | 0.0 | 0.0 | 9.8 |
| 2.NZ | 0.0 | 0.0 | 26.9 | 26.9 |
| 3.Ontario | 9.0 | 0.0 | 0.0 | 9.0 |
| Total | 6.4 | 0.0 | 8.4 | 14.8 |

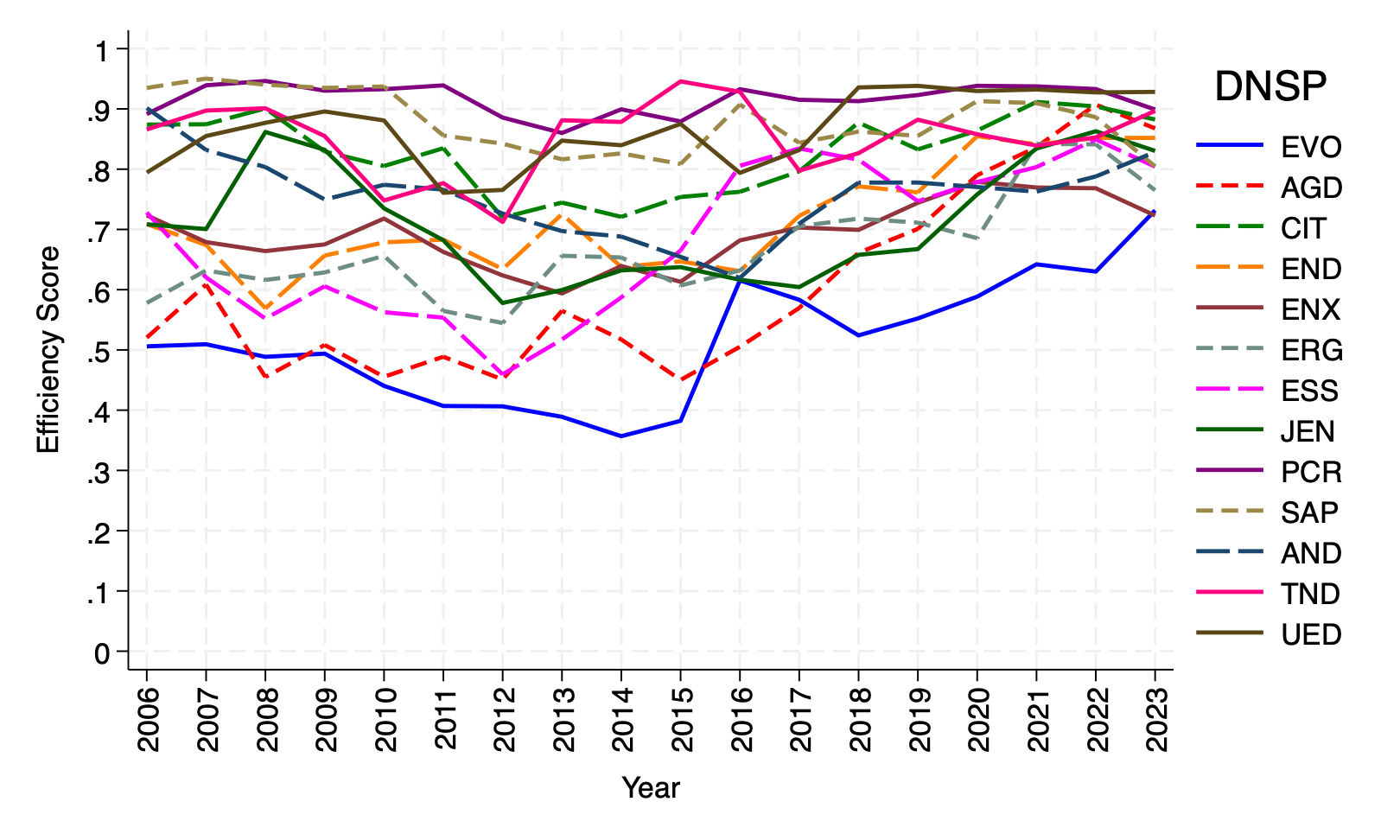
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | mon1 | mon2 | mon3 | montot |
| dnsp |  |  |  |  |
| 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2 | 100.0 | 0.0 | 0.0 | 100.0 |
| 3 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4 | 22.2 | 0.0 | 0.0 | 22.2 |
| 5 | 5.6 | 0.0 | 0.0 | 5.6 |
| 6 | 0.0 | 0.0 | 0.0 | 0.0 |
| 7 | 0.0 | 0.0 | 0.0 | 0.0 |
| 8 | 0.0 | 0.0 | 0.0 | 0.0 |
| 9 | 0.0 | 0.0 | 0.0 | 0.0 |
| 10 | 0.0 | 0.0 | 0.0 | 0.0 |
| 11 | 0.0 | 0.0 | 0.0 | 0.0 |
| 12 | 0.0 | 0.0 | 0.0 | 0.0 |
| 13 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total | 9.8 | 0.0 | 0.0 | 9.8 |

SFATLG BC95-JTT-HN Efficiency Scores (long period)

|  |  |  |  |
| --- | --- | --- | --- |
|  | Cost efficiency via E(exp(-u)|e) | 95% lower bound of E(exp(-u)|e) | 95% upper bound of E(exp(-u)|e) |
| Country code |  |  |  |
| 1.Aust | 0.745 | 0.616 | 0.872 |
| 2.NZ | 0.757 | 0.626 | 0.884 |
| 3.Ontario | 0.923 | 0.805 | 0.994 |
| Total | 0.833 | 0.709 | 0.933 |

|  |  |  |  |
| --- | --- | --- | --- |
|  | Cost efficiency via E(exp(-u)|e) | 95% lower bound of E(exp(-u)|e) | 95% upper bound of E(exp(-u)|e) |
| dnsp |  |  |  |
| 1 | 0.514 | 0.417 | 0.625 |
| 2 | 0.603 | 0.493 | 0.722 |
| 3 | 0.827 | 0.683 | 0.960 |
| 4 | 0.717 | 0.585 | 0.861 |
| 5 | 0.692 | 0.563 | 0.842 |
| 6 | 0.669 | 0.544 | 0.809 |
| 7 | 0.683 | 0.556 | 0.821 |
| 8 | 0.711 | 0.580 | 0.853 |
| 9 | 0.916 | 0.787 | 0.996 |
| 10 | 0.879 | 0.742 | 0.987 |
| 11 | 0.757 | 0.618 | 0.908 |
| 12 | 0.852 | 0.710 | 0.974 |
| 13 | 0.867 | 0.729 | 0.980 |
| Total | 0.745 | 0.616 | 0.872 |

SFATLG BC95-JTT-HN Efficiency Scores (long period)



SFATLG BC95-JTT-HN Alternative Elasticities (long period)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | aely1 | aely2 | aely3 | aelY |
| Country code |  |  |  |  |
| 1.Aust | -0.473 | 0.103 | 0.598 | 0.228 |
| 2.NZ | 0.914 | 0.103 | 0.158 | 1.176 |
| 3.Ontario | 0.556 | 0.103 | 0.502 | 1.161 |
| Total | 0.448 | 0.103 | 0.415 | 0.967 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | aely1 | aely2 | aely3 | aelY |
| dnsp |  |  |  |  |
| 1 | 0.143 | 0.103 | 0.483 | 0.729 |
| 2 | -1.030 | 0.103 | 0.778 | -0.149 |
| 3 | -0.231 | 0.103 | 0.645 | 0.517 |
| 4 | -0.791 | 0.103 | 0.775 | 0.087 |
| 5 | -0.911 | 0.103 | 0.723 | -0.085 |
| 6 | -0.647 | 0.103 | 0.749 | 0.205 |
| 7 | -0.582 | 0.103 | 0.561 | 0.083 |
| 8 | -0.029 | 0.103 | 0.380 | 0.454 |
| 9 | -0.523 | 0.103 | 0.545 | 0.126 |
| 10 | -0.640 | 0.103 | 0.642 | 0.105 |
| 11 | -0.383 | 0.103 | 0.426 | 0.146 |
| 12 | -0.101 | 0.103 | 0.562 | 0.564 |
| 13 | -0.422 | 0.103 | 0.504 | 0.186 |
| Total | -0.473 | 0.103 | 0.598 | 0.228 |

SFATLG BC95-JTT-HN Alternative Monotonicity Violations (long period)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | mv1 | mv2 | mv3 | mvtot |
| Country code |  |  |  |  |
| 1.Aust | 91.9 | 0.0 | 0.0 | 91.9 |
| 2.NZ | 8.2 | 0.0 | 25.7 | 33.9 |
| 3.Ontario | 13.8 | 0.0 | 0.0 | 13.8 |
| Total | 28.7 | 0.0 | 8.0 | 36.7 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | mv1 | mv2 | mv3 | mvtot |
| dnsp |  |  |  |  |
| 1 | 5.6 | 0.0 | 0.0 | 5.6 |
| 2 | 100.0 | 0.0 | 0.0 | 100.0 |
| 3 | 100.0 | 0.0 | 0.0 | 100.0 |
| 4 | 100.0 | 0.0 | 0.0 | 100.0 |
| 5 | 100.0 | 0.0 | 0.0 | 100.0 |
| 6 | 100.0 | 0.0 | 0.0 | 100.0 |
| 7 | 100.0 | 0.0 | 0.0 | 100.0 |
| 8 | 88.9 | 0.0 | 0.0 | 88.9 |
| 9 | 100.0 | 0.0 | 0.0 | 100.0 |
| 10 | 100.0 | 0.0 | 0.0 | 100.0 |
| 11 | 100.0 | 0.0 | 0.0 | 100.0 |
| 12 | 100.0 | 0.0 | 0.0 | 100.0 |
| 13 | 100.0 | 0.0 | 0.0 | 100.0 |
| Total | 91.9 | 0.0 | 0.0 | 91.9 |

Short period

SFACD BC95-JTT-HN Elasticities (short period)

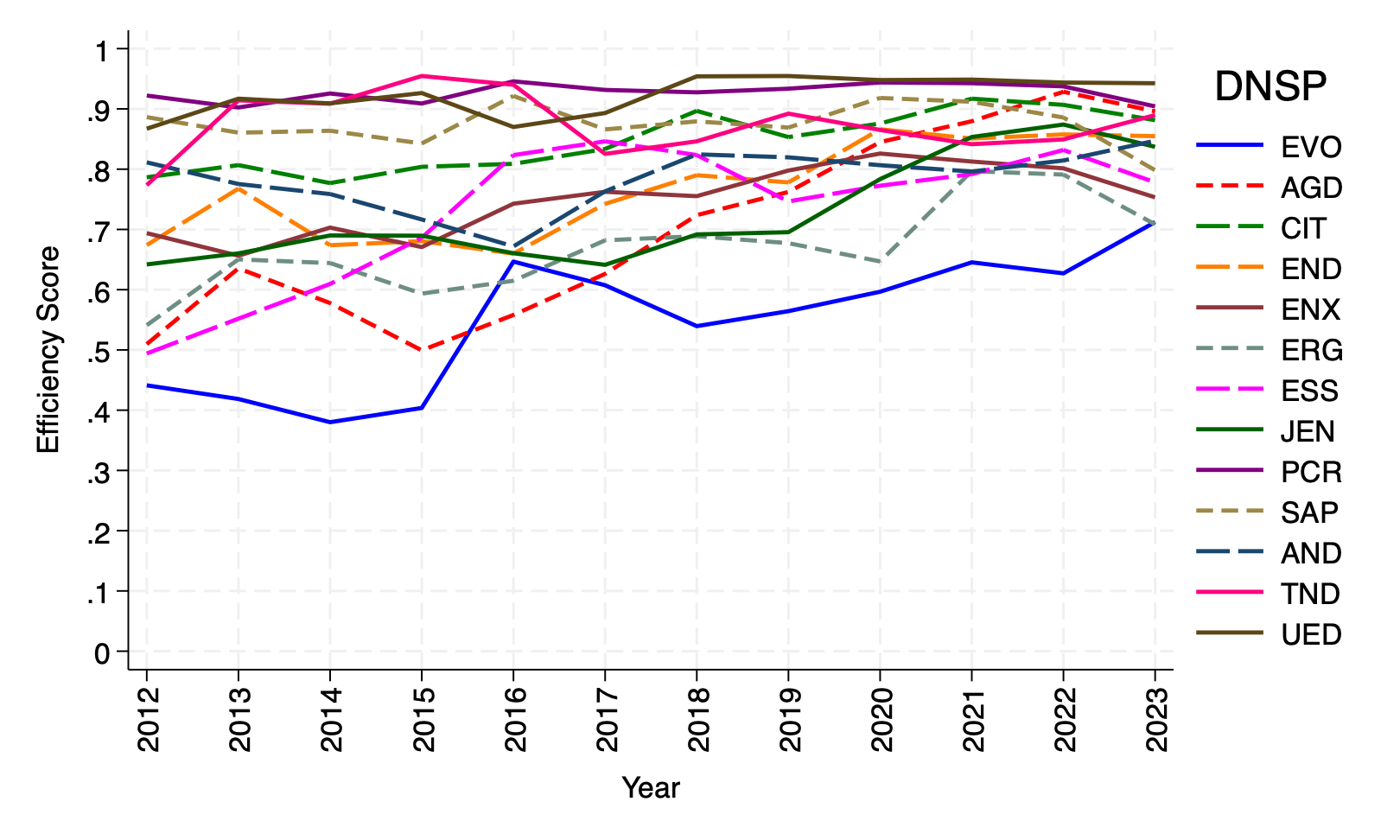
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | ely1 | ely2 | ely3 | elY |
| Country code |  |  |  |  |
| 1.Aust | 0.397 | 0.134 | 0.463 | 0.994 |
| 2.NZ | 0.397 | 0.134 | 0.463 | 0.994 |
| 3.Ontario | 0.397 | 0.134 | 0.463 | 0.994 |
| Total | 0.397 | 0.134 | 0.463 | 0.994 |

SFACD BC95-JTT-HN Efficiency Scores (short period)

|  |  |  |  |
| --- | --- | --- | --- |
|  | Cost efficiency via E(exp(-u)|e) | 95% lower bound of E(exp(-u)|e) | 95% upper bound of E(exp(-u)|e) |
| Country code |  |  |  |
| 1.Aust | 0.779 | 0.645 | 0.905 |
| 2.NZ | 0.706 | 0.580 | 0.833 |
| 3.Ontario | 0.961 | 0.877 | 0.999 |
| Total | 0.843 | 0.735 | 0.927 |

|  |  |  |  |
| --- | --- | --- | --- |
|  | Cost efficiency via E(exp(-u)|e) | 95% lower bound of E(exp(-u)|e) | 95% upper bound of E(exp(-u)|e) |
| dnsp |  |  |  |
| 1 | 0.549 | 0.444 | 0.670 |
| 2 | 0.703 | 0.578 | 0.828 |
| 3 | 0.846 | 0.698 | 0.976 |
| 4 | 0.766 | 0.625 | 0.914 |
| 5 | 0.748 | 0.607 | 0.905 |
| 6 | 0.670 | 0.542 | 0.816 |
| 7 | 0.730 | 0.593 | 0.876 |
| 8 | 0.727 | 0.591 | 0.872 |
| 9 | 0.927 | 0.802 | 0.997 |
| 10 | 0.875 | 0.729 | 0.989 |
| 11 | 0.784 | 0.637 | 0.939 |
| 12 | 0.875 | 0.735 | 0.986 |
| 13 | 0.923 | 0.800 | 0.996 |
| Total | 0.779 | 0.645 | 0.905 |

SFACD BC95-JTT-HN Efficiency Scores (short period)



SFATLG BC95-JTT-HN Elasticities (short period)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | ely1 | ely2 | ely3 | elY |
| Country code |  |  |  |  |
| 1.Aust | 0.079 | 0.202 | 0.680 | 0.961 |
| 2.NZ | 0.661 | 0.175 | 0.063 | 0.898 |
| 3.Ontario | 0.388 | 0.121 | 0.456 | 0.965 |
| Total | 0.407 | 0.155 | 0.381 | 0.944 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | ely1 | ely2 | ely3 | elY |
| dnsp |  |  |  |  |
| 1 | 0.287 | 0.152 | 0.507 | 0.947 |
| 2 | -0.148 | 0.194 | 0.934 | 0.980 |
| 3 | 0.129 | 0.133 | 0.701 | 0.963 |
| 4 | -0.109 | 0.201 | 0.910 | 1.001 |
| 5 | -0.097 | 0.208 | 0.865 | 0.976 |
| 6 | -0.097 | 0.267 | 0.866 | 1.036 |
| 7 | 0.034 | 0.272 | 0.674 | 0.980 |
| 8 | 0.360 | 0.147 | 0.378 | 0.884 |
| 9 | 0.094 | 0.234 | 0.624 | 0.952 |
| 10 | -0.003 | 0.240 | 0.747 | 0.983 |
| 11 | 0.220 | 0.213 | 0.475 | 0.908 |
| 12 | 0.183 | 0.205 | 0.588 | 0.976 |
| 13 | 0.178 | 0.163 | 0.571 | 0.912 |
| Total | 0.079 | 0.202 | 0.680 | 0.961 |

SFATLG BC95-JTT-HN Monotonicity Violations (short period)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | mon1 | mon2 | mon3 | montot |
| Country code |  |  |  |  |
| 1.Aust | 34.6 | 0.0 | 0.0 | 34.6 |
| 2.NZ | 0.0 | 0.0 | 36.4 | 36.4 |
| 3.Ontario | 10.3 | 0.0 | 0.0 | 10.3 |
| Total | 12.3 | 0.0 | 11.3 | 23.6 |

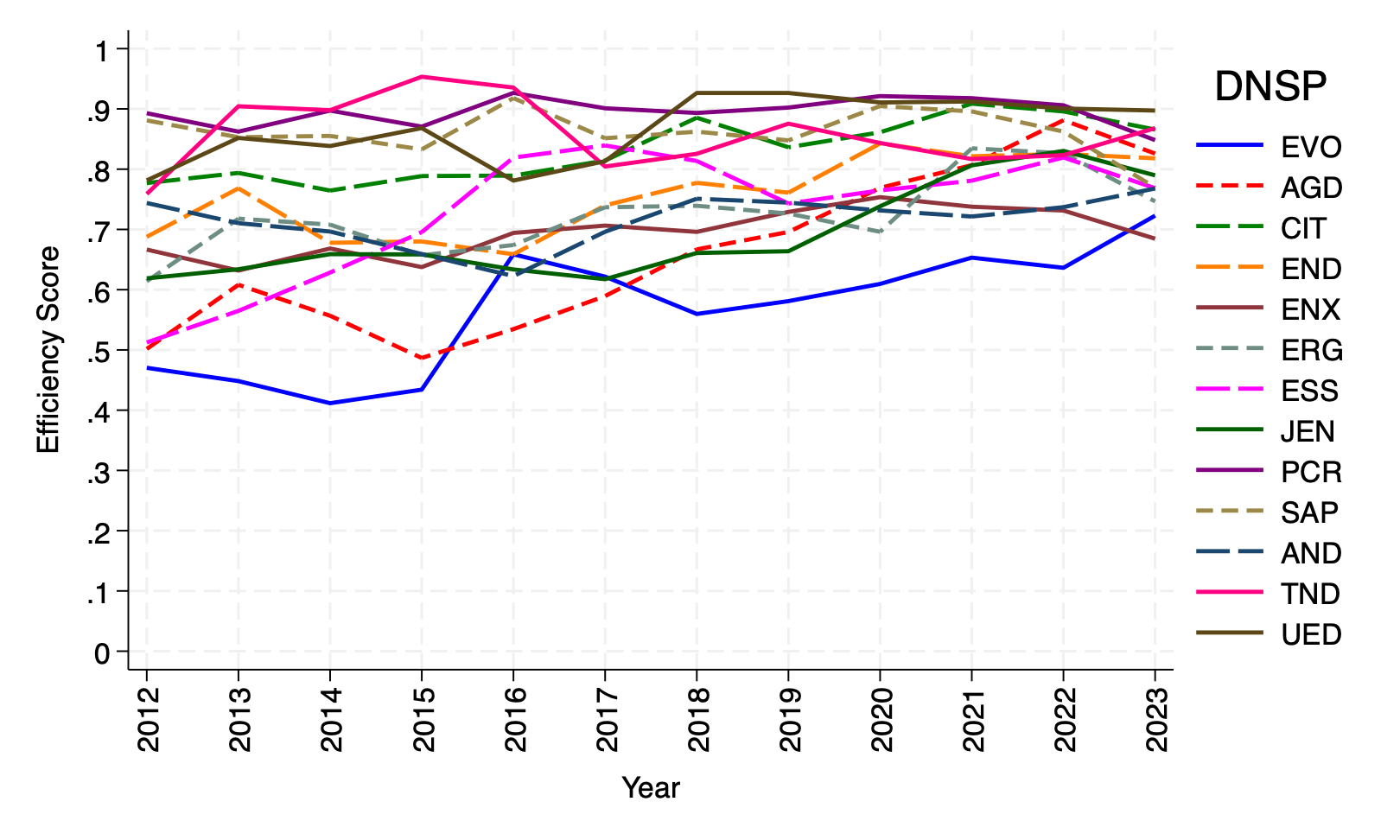
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | mon1 | mon2 | mon3 | montot |
| dnsp |  |  |  |  |
| 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2 | 100.0 | 0.0 | 0.0 | 100.0 |
| 3 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4 | 100.0 | 0.0 | 0.0 | 100.0 |
| 5 | 100.0 | 0.0 | 0.0 | 100.0 |
| 6 | 100.0 | 0.0 | 0.0 | 100.0 |
| 7 | 0.0 | 0.0 | 0.0 | 0.0 |
| 8 | 0.0 | 0.0 | 0.0 | 0.0 |
| 9 | 0.0 | 0.0 | 0.0 | 0.0 |
| 10 | 50.0 | 0.0 | 0.0 | 50.0 |
| 11 | 0.0 | 0.0 | 0.0 | 0.0 |
| 12 | 0.0 | 0.0 | 0.0 | 0.0 |
| 13 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total | 34.6 | 0.0 | 0.0 | 34.6 |

SFATLG BC95-JTT-HN Efficiency Scores (short period)

|  |  |  |  |
| --- | --- | --- | --- |
|  | Cost efficiency via E(exp(-u)|e) | 95% lower bound of E(exp(-u)|e) | 95% upper bound of E(exp(-u)|e) |
| Country code |  |  |  |
| 1.Aust | 0.758 | 0.638 | 0.879 |
| 2.NZ | 0.000 | 0.000 | 0.000 |
| 3.Ontario | 0.945 | 0.847 | 0.997 |
| Total | 0.611 | 0.539 | 0.661 |

|  |  |  |  |
| --- | --- | --- | --- |
|  | Cost efficiency via E(exp(-u)|e) | 95% lower bound of E(exp(-u)|e) | 95% upper bound of E(exp(-u)|e) |
| dnsp |  |  |  |
| 1 | 0.567 | 0.474 | 0.674 |
| 2 | 0.660 | 0.553 | 0.777 |
| 3 | 0.832 | 0.701 | 0.959 |
| 4 | 0.755 | 0.632 | 0.890 |
| 5 | 0.695 | 0.580 | 0.825 |
| 6 | 0.723 | 0.605 | 0.856 |
| 7 | 0.729 | 0.610 | 0.861 |
| 8 | 0.693 | 0.579 | 0.820 |
| 9 | 0.895 | 0.766 | 0.992 |
| 10 | 0.861 | 0.729 | 0.979 |
| 11 | 0.715 | 0.598 | 0.849 |
| 12 | 0.859 | 0.732 | 0.972 |
| 13 | 0.867 | 0.739 | 0.976 |
| Total | 0.758 | 0.638 | 0.879 |

SFATLG BC95-JTT-HN Efficiency Scores (short period)



SFATLG BC95-JTT-HN Alternative Elasticities (short period)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | aely1 | aely2 | aely3 | aelY |
| Country code |  |  |  |  |
| 1.Aust | -0.652 | 0.155 | 0.673 | 0.176 |
| 2.NZ | 0.912 | 0.155 | 0.062 | 1.129 |
| 3.Ontario | 0.525 | 0.155 | 0.460 | 1.139 |
| Total | 0.395 | 0.155 | 0.381 | 0.931 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | aely1 | aely2 | aely3 | aelY |
| dnsp |  |  |  |  |
| 1 | 0.020 | 0.155 | 0.506 | 0.681 |
| 2 | -1.275 | 0.155 | 0.926 | -0.194 |
| 3 | -0.373 | 0.155 | 0.701 | 0.483 |
| 4 | -1.013 | 0.155 | 0.902 | 0.044 |
| 5 | -1.151 | 0.155 | 0.856 | -0.140 |
| 6 | -0.845 | 0.155 | 0.853 | 0.164 |
| 7 | -0.785 | 0.155 | 0.661 | 0.031 |
| 8 | -0.146 | 0.155 | 0.376 | 0.385 |
| 9 | -0.712 | 0.155 | 0.613 | 0.056 |
| 10 | -0.836 | 0.155 | 0.736 | 0.055 |
| 11 | -0.553 | 0.155 | 0.467 | 0.069 |
| 12 | -0.215 | 0.155 | 0.582 | 0.522 |
| 13 | -0.592 | 0.155 | 0.567 | 0.130 |
| Total | -0.652 | 0.155 | 0.673 | 0.176 |

SFATLG BC95-JTT-HN Alternative Monotonicity Violations (short period)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | mv1 | mv2 | mv3 | mvtot |
| Country code |  |  |  |  |
| 1.Aust | 96.2 | 0.0 | 0.0 | 96.2 |
| 2.NZ | 10.5 | 0.0 | 36.4 | 46.9 |
| 3.Ontario | 13.8 | 0.0 | 0.0 | 13.8 |
| Total | 30.3 | 0.0 | 11.3 | 41.7 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | mv1 | mv2 | mv3 | mvtot |
| dnsp |  |  |  |  |
| 1 | 50.0 | 0.0 | 0.0 | 50.0 |
| 2 | 100.0 | 0.0 | 0.0 | 100.0 |
| 3 | 100.0 | 0.0 | 0.0 | 100.0 |
| 4 | 100.0 | 0.0 | 0.0 | 100.0 |
| 5 | 100.0 | 0.0 | 0.0 | 100.0 |
| 6 | 100.0 | 0.0 | 0.0 | 100.0 |
| 7 | 100.0 | 0.0 | 0.0 | 100.0 |
| 8 | 100.0 | 0.0 | 0.0 | 100.0 |
| 9 | 100.0 | 0.0 | 0.0 | 100.0 |
| 10 | 100.0 | 0.0 | 0.0 | 100.0 |
| 11 | 100.0 | 0.0 | 0.0 | 100.0 |
| 12 | 100.0 | 0.0 | 0.0 | 100.0 |
| 13 | 100.0 | 0.0 | 0.0 | 100.0 |
| Total | 96.2 | 0.0 | 0.0 | 96.2 |