|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Table 1. Indegree by Prefecture for 2010-2012 | | | | |  |  |  |  |  |  |  |
| **2010** | | | | **2011** | | | | **2012** | | | |
| Rank | Prefecture | Indegree | Indeg/ Pop | Rank | Prefecture | Indegree | Indeg/ Pop | Rank | Prefecture | Indegree | Indeg/ Pop |
| 1 | Tokyo | 396318 | 0.03 | 1 | Tokyo | 394116 | 0.03 | 1 | Tokyo | 400274 | 0.030 |
| 2 | Chiba | 151402 | 0.024 | 2 | Kanagawa | 210631 | 0.023 | 2 | Kanagawa | 207908 | 0.023 |
| 3 | Kanagawa | 215904 | 0.024 | 3 | Chiba | 132651 | 0.022 | 3 | Miyagi | 53183 | 0.023 |
| 4 | Saitama | 162483 | 0.022 | 4 | Saitama | 157961 | 0.022 | 4 | Saitama | 157961 | 0.022 |
| 5 | Miyagi | 47358 | 0.02 | 5 | Kyoto | 53997 | 0.02 | 5 | Chiba | 132651 | 0.021 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| 17 | Ibaraki | 50029 | 0.017 | 24 | Ibaraki | 46329 | 0.016 | 25 | Ibaraki | 45714 | 0.015 |
| 40 | Fukushima | 25611 | 0.013 | 45 | Fukushima | 21741 | 0.011 | 44 | Fukushima | 23346 | 0.012 |
|  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Table 2. Outdegree by Prefecture for 2010-2012 | | | | | |  |  |  |  |  |  |
| **2010** | | | | **2011** | | | | **2012** | | | |
| Rank | Prefecture | Outdegree | Outdeg/ Pop | Rank | Prefecture | Outdegree | Outdeg/ Pop | Rank | Prefecture | Outdegree | Outdeg/ Pop |
| 1 | Tokyo | 347987 | 0.026 | 1 | Tokyo | 349634 | 0.027 | 1 | Tokyo | 343777 | 0.026 |
| 2 | Kanagawa | 201017 | 0.022 | 2 | Fukushima | 53122 | 0.026 | 2 | Chiba | 140839 | 0.023 |
| 3 | Chiba | 137215 | 0.022 | 3 | Miyagi | 54064 | 0.023 | 3 | Kanagawa | 199306 | 0.022 |
| 4 | Kyoto | 54954 | 0.021 | 4 | Chiba | 142337 | 0.023 | 4 | Kyoto | 54239 | 0.021 |
| 5 | Akita | 17494 | 0.021 | 5 | Kanagawa | 200512 | 0.022 | 5 | Saitama | 147663 | 0.021 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| 28 | Ibaraki | 49085 | 0.017 | 20 | Ibaraki | 51080 | 0.017 | 14 | Ibaraki | 37189 | 0.018 |
| 31 | Fukushima | 31363 | 0.015 |  |  |  |  | 24 | Fukushima | 49780 | 0.017 |
|  |  |  |  |  |  |  |  |  |  |  |  |

Table 3. GERGM Estimates by Year Range

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Parameters |  | 2010 – 2011 |  | 2010 – 2012 |  | 2010 – 2013 |
| *Covariates* |  |  |  |  |  |  |
| Disaster Sender |  | **37.592** |  | **17.765** |  | 5.000 |
|  |  | **(7.126)** |  | **(3.947)** |  | (4.139) |
| Disaster Receiver |  | **-2.633** |  | -0.027 |  | **1.814** |
|  |  | **(0.713)** |  | (0.788) |  | **(0.864)** |
| TFR Sender |  | -0.078 |  | -0.440 |  | 0.001 |
|  |  | (0.692) |  | (0.666) |  | (0.649) |
| TFR Receiver |  | 0.550 |  | 0.356 |  | -0.347 |
|  |  | (0.694) |  | (0.647) |  | (0.648) |
| Population Sender |  | 1.951 |  | -0.495 |  | **-6.606** |
|  |  | (1.448) |  | (1.362) |  | **(1.302)** |
| Population Receiver |  | **-5.421** |  | -0.933 |  | 1.440 |
|  |  | **(1.154)** |  | (1.246) |  | (1.251) |
| *Structural* |  |  |  |  |  |  |
| Triads |  | **0.042** |  | **0.035** |  | -0.004 |
|  |  | **(0.005)** |  | **(0.005)** |  | (0.005) |
| Mutual |  | **-2.629** |  | **-2.148** |  | 0.029 |
|  |  | **(0.331)** |  | **(0.316)** |  | (0.371) |
| Intercept |  | **-14.121** |  | **-15.203** |  | -11.501 |
|  |  | **(6.619)** |  | **(6.660)** |  | (6.557) |

Note: Bolded values are significant at the *p* < 0.05 level