**Table 2 - Poisson-Gamma-CAR regression models using Monte Carlo (MCMC) estimation method and spatial distance decay function for categories for grouped temporal (BP-PP) variances**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Dependent Variables** | **Littering** | | **Graffiti & Physical Damage** | | **Urination & Defecation** | | **Abandoned Cars** | | **Poor Bike Parking** | |
| N | 838 | | 838 | | 838 | | 838 | | 838 | |
| Df | 826 | | 826 | | 826 | | 826 | | 826 | |
| Log-likelihood | -3828.6055 | | -4140.566994 | | -1829.3215 | | -1221.9949 | | -1599.8099 | |
| AIC | 7681.2109 | | 8305.133987 | | 3682.6429 | | 2467.9898 | | 3223.6199 | |
| BIC | 7737.9831 | | 8361.906204 | | 3739.4152 | | 2524.7620 | | 3280.3922 | |
| Mean absolute deviation | 25.0584 | | 42.536447 | | 3.2101 | | 1.8646 | | 1.8743 | |
| Mean squared predicted error | 1416.2729 | | 4440.866597 | | 35.1647 | | 25.0896 | | 11.3843 | |
| Dispersion multiplier | 0.50\*\*\*\*\*\* | | 0.772589\* | | 1.30 n.s. | | 1.30 n.s. | | 0.68 n.s. | |
| Modelled Parameters |  |  |  |  |  |  |  |  |  |  |
| **Independent Variables** | **Mean** | **Tolerance** | **Mean** | **Tolerance** | **Mean** | **Tolerance** | **Mean** | **Tolerance** | **Mean** | **Tolerance** |
| **Intercept** | 2.5844\*\*\* |  | 2.8998\*\*\* |  | 0.9234\*\*\* |  | -1.5877\*\*\* |  | 0.5531\*\*\* |  |
| **Factor (BP=0. PP=1)** | 0.2371\*\*\* | 1.00000 | 0.1676\* | 1.00000 | 0.1944\*\* | 1.00000 | -0.0286 n.s. | 1.00000 | 0.1186 n.s. | 1.00000 |
| **Rate of Vandalism** | 0.0031\* | 0.7872 | 0.0065\*\*\* | 0.7872 | 0.0055\*\*\* | 0.7872 | 0.0038 n.s. | 0.7872 | 0.0030\*\* | 0.7872 |
| **Prop. of young Males** | 5.5994\*\*\* | 0.9394 | 4.6487\*\* | 0.9394 | 2.8191\* | 0.9394 | 3.2779\*\* | 0.9394 | 4.7054\*\*\* | 0.9394 |
| **P\_HUB\_A** | 0.0165 n.s. | 0.8314 | -0.0034 n.s. | 0.8314 | 0.0739\*\*\* | 0.8314 | -0.0679\*\*\* | 0.8314 | 0.0287\*\* | 0.8314 |
| **P\_PARK\_A** | 0.0355\*\*\* | 0.9421 | 0.0562\*\*\* | 0.9421 | 0.0261\*\* | 0.9421 | 0.0002 n.s. | 0.9421 | 0.0240\*\* | 0.9421 |
| **P\_SKOLAN\_A** | 0.0182\*\*\* | 0.9323 | 0.0231 n.s. | 0.9323 | 0.0169 n.s. | 0.9323 | -0.0052 n.s. | 0.9323 | -0.0004 n.s. | 0.9323 |
| **P\_UNEMPLOY** | 0.0486 n.s. | 0.9695 | -0.4114 n.s. | 0.9695 | -2.7720\*\*\* | 0.9695 | 0.4413 n.s. | 0.9695 | -1.3868\* | 0.9695 |
| **Distance from City Center** | -0.0000\* | 0.7176 | 0.0000 n.s. | 0.7176 | -0.0001\*\*\* | 0.7176 | 0.0002\*\*\* | 0.7176 | -0.0002\*\*\* | 0.7175 |
| **Area** | -0.0000\*\*\* | 0.7795 | 0.0000\*\*\* | 0.7795 | 0.0000\*\*\* | 0.7176 | 0.0000\*\*\* | 0.7795 | 0.0000\*\*\* | 0.7795 |
| Spatial autocorrelation |  |  |  |  |  |  |  |  |  |  |
| (Phi): | 0.0051 n.s. |  | 0.0034 n.s. |  | -0.0011 n.s. |  | 0.0009 n.s. |  | 0.0035 n.s. |  |
|  |  | |  |  |  |  |  |  |  |  |
| p-value = 10 % : \* | p-value = 5 % : \*\* | | n.s. : Not significant | |
| p-value = 1% : \*\*\* |  | |  | |
|  | |  |  |  |  |  |  |  |  |  |