

Simulation Tables

Carter Allen

Table 1: Model results for simulated data with $n = 1000$, $k = 4$, $p = 2$, $h = 3$, $r = 2$. 1000 iterations were run with a burn in of 250. Missingness mechanism was MAR and $P(\text{miss}) = 0$

| Model Component | Parameter | Class 1 | | Class 2 | | Class 3 | |
|--------------------|---------------|---------|-------------------|---------|----------------------|---------|----------------------|
| | | True | Est. (95% CrI) | True | Est. (95% CrI) | True | Est. (95% CrI) |
| MVSN Regression | β_{11} | 2.04 | 1.3 (1.06, 1.54) | 5.64 | 0.82 (0.45, 1.19) | 9.92 | -3.44 (-3.76, -3.11) |
| | β_{21} | 0.42 | 3.28 (3.16, 3.4) | 4.15 | -0.27 (-0.43, -0.08) | 8.28 | -1.96 (-2.13, -1.8) |
| | β_{31} | 2.35 | 1.82 (1.61, 2.07) | 4.46 | 0.62 (0.23, 0.94) | 9.41 | -3.41 (-3.74, -3.08) |
| | β_{41} | 0.81 | 2.55 (2.45, 2.67) | 5.53 | -0.6 (-0.76, -0.42) | 8.76 | -3.25 (-3.42, -3.09) |
| | β_{12} | 1.01 | 1.54 (1.31, 1.77) | 4.49 | 0.4 (0.04, 0.72) | 8.7 | -3.44 (-3.71, -3.18) |
| | β_{22} | 3.24 | 2.08 (1.96, 2.18) | 0.98 | -0.34 (-0.51, -0.18) | 9.3 | -2.62 (-2.76, -2.5) |
| | β_{32} | -0.42 | 0.72 (0.51, 0.94) | 4 | 0.26 (-0.1, 0.62) | 9.58 | -3.29 (-3.59, -2.97) |
| | β_{42} | 0.33 | 3.35 (3.24, 3.46) | 2.06 | 0.16 (-0.01, 0.32) | 8.17 | -2.65 (-2.8, -2.49) |
| | Ω_{11} | 13.59 | 1.74 (1.53, 1.99) | 77.23 | 1.25 (0.95, 1.68) | 583.05 | 1.48 (1.21, 1.83) |
| | Ω_{12} | 3.37 | 1.28 (1.08, 1.5) | 74.54 | 0.61 (0.4, 0.95) | 582.43 | 0.9 (0.69, 1.22) |
| | Ω_{13} | 4.91 | 0.93 (0.75, 1.15) | 67 | 0.3 (0.1, 0.56) | 576.11 | 0.48 (0.3, 0.71) |
| | Ω_{14} | 10.03 | 0.78 (0.61, 0.97) | 72.56 | 0.1 (-0.1, 0.34) | 582.86 | 0.46 (0.28, 0.69) |
| | Ω_{22} | 12.71 | 1.71 (1.47, 1.95) | 75.39 | 1.08 (0.81, 1.42) | 588.89 | 1.42 (1.16, 1.74) |
| | Ω_{23} | 8.29 | 1.18 (0.98, 1.38) | 67.81 | 0.66 (0.44, 0.94) | 574.34 | 0.77 (0.57, 1.01) |
| | Ω_{24} | 6.67 | 0.94 (0.76, 1.16) | 73.52 | 0.27 (0.06, 0.5) | 579.46 | 0.63 (0.44, 0.88) |
| | Ω_{33} | 10.55 | 1.67 (1.47, 1.9) | 72.9 | 0.97 (0.75, 1.3) | 577.7 | 1.12 (0.91, 1.37) |
| | Ω_{34} | 9.65 | 1.17 (1, 1.38) | 67.8 | 0.51 (0.33, 0.77) | 578.12 | 0.71 (0.54, 0.95) |
| | Ω_{44} | 11.8 | 1.65 (1.44, 1.89) | 77.64 | 1.05 (0.81, 1.4) | 590.32 | 1.28 (1.07, 1.56) |
| | α_1 | -187.99 | 0 (0, 0) | 0.77 | 0 (0, 0) | -3.23 | 0 (0, 0) |
| | α_2 | 20.33 | 0 (0, 0) | 0.16 | 0 (0, 0) | -4.24 | 0 (0, 0) |
| | α_3 | -250.26 | 0 (0, 0) | 1.83 | 0 (0, 0) | -22.54 | 0 (0, 0) |
| | α_4 | 320.36 | 0 (0, 0) | 0.45 | 0 (0, 0) | 4.37 | 0 (0, 0) |
| Multinom. | δ_{11} | 0.61 | 0.45 (0.22, 0.68) | 0.61 | 0.45 (0.22, 0.68) | 0.61 | 0.45 (0.22, 0.68) |
| | δ_{12} | 0.24 | 0.4 (0.04, 0.73) | 0.24 | 0.4 (0.04, 0.73) | 0.24 | 0.4 (0.04, 0.73) |
| | δ_{21} | 0.76 | 0.6 (0.38, 0.83) | 0.76 | 0.6 (0.38, 0.83) | 0.76 | 0.6 (0.38, 0.83) |
| | δ_{22} | 0.31 | 0.42 (0.12, 0.77) | 0.31 | 0.42 (0.12, 0.77) | 0.31 | 0.42 (0.12, 0.77) |
| Clustering | π_l | 0.19 | 0.56 (0.53, 0.6) | 0.37 | 0.18 (0.15, 0.21) | 0.44 | 0.26 (0.23, 0.29) |