

**Table 1:** Log-likelihood, penalty terms, GORICA values, and their corresponding weights for each model.

| Model  | log-likelihood<br>( $L_m$ ) | penalty term<br>( $PT_m$ ) | GORICA values<br>( $GORICA_m$ ) | log-likelihood weight<br>( $L_{w_m}$ ) | penalty weight<br>( $PT_{w_m}$ ) | GORICA weight<br>( $GORICA_{w_m}$ ) |
|--|-----------------------------|----------------------------|---------------------------------|--|----------------------------------|-------------------------------------|
| <b>RI-CLPM (full)</b>  |                             |                            |                                 |  |                                  |                                     |
| Model $H_1$ : RI-CLPM( $\kappa, \omega, \epsilon, \zeta, \eta, \chi, \psi$ ) | 10.372                      | 4.346                      | -12.052                         | 0.293                                  | 0.003                            | 0.154                               |
| <b>RI-CLPM with no RIs</b>   |                             |                            |                                 |  |                                  |                                     |
| Model $H_2$ : CLPM   | -60.187                     | 4.346                      | 129.067                         | 0                                      | 0.003                            | 0                                   |
| <b>RI-CLPM with one RI</b>   |                             |                            |                                 |  |                                  |                                     |
| Model $H_3$ : RI-CLPM( $\kappa$ )  | -72.606                     | 3.453                      | 152.117                         | 0                                      | 0.008                            | 0                                   |
| Model $H_4$ : RI-CLPM( $\omega$ )  | -76.139                     | 3.525                      | 159.328                         | 0                                      | 0.007                            | 0                                   |
| Model $H_5$ : RI-CLPM( $\epsilon$ )  | -59.973                     | 4.182                      | 128.31                          | 0                                      | 0.004                            | 0                                   |
| Model $H_6$ : RI-CLPM( $\zeta$ )   | -52.203                     | 3.81                       | 112.026                         | 0                                      | 0.006                            | 0                                   |
| Model $H_7$ : RI-CLPM( $\eta$ )  | -41.417                     | 3.902                      | 90.638                          | 0                                      | 0.005                            | 0                                   |
| Model $H_8$ : RI-CLPM( $\chi$ )  | -51.858                     | 4.284                      | 112.284                         | 0                                      | 0.003                            | 0                                   |
| Model $H_9$ : RI-CLPM( $\psi$ )  | -47.352                     | 3.823                      | 102.351                         | 0                                      | 0.005                            | 0                                   |
| <b>RI-CLPM with two RIs</b>  |                             |                            |                                 |  |                                  |                                     |
| Model $H_{10}$ : RI-CLPM( $\kappa, \omega$ )                                 | -78.239                     | 3.544                      | 163.565                         | 0                                      | 0.007                            | 0                                   |
| Model $H_{11}$ : RI-CLPM( $\kappa, \epsilon$ )                               | -72.401                     | 3.308                      | 151.418                         | 0                                      | 0.009                            | 0                                   |
| Model $H_{12}$ : RI-CLPM( $\kappa, \zeta$ )                                  | -59.408                     | 3.291                      | 125.398                         | 0                                      | 0.009                            | 0                                   |

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**Table 3:** (continued)

| Model  | log-likelihood<br>( $L_m$ ) | penalty term<br>( $PT_m$ ) | GORICA values<br>( $GORICA_m$ ) | log-likelihood weight<br>( $L_{w_m}$ ) | penalty weight<br>( $PT_{w_m}$ ) | GORICA weight<br>( $GORICA_{w_m}$ ) |
|--|-----------------------------|----------------------------|---------------------------------|--|----------------------------------|-------------------------------------|
| Model $H_{13}$ : RI-CLPM( $\kappa, \eta$ )     | -47.107                     | 3.254                      | 100.721                         | 0                                      | 0.01                             | 0                                   |
| Model $H_{14}$ : RI-CLPM( $\kappa, \chi$ )     | -65.747                     | 3.314                      | 138.122                         | 0                                      | 0.009                            | 0                                   |
| Model $H_{15}$ : RI-CLPM( $\kappa, \psi$ )     | -52.573                     | 3.349                      | 111.844                         | 0                                      | 0.009                            | 0                                   |
| Model $H_{16}$ : RI-CLPM( $\omega, \epsilon$ ) | -75.88                      | 3.4                        | 158.559                         | 0                                      | 0.008                            | 0                                   |
| Model $H_{17}$ : RI-CLPM( $\omega, \zeta$ )    | -63.99                      | 3.191                      | 134.362                         | 0                                      | 0.01                             | 0                                   |
| Model $H_{18}$ : RI-CLPM( $\omega, \eta$ )     | -47.442                     | 3.463                      | 101.81                          | 0                                      | 0.008                            | 0                                   |
| Model $H_{19}$ : RI-CLPM( $\omega, \chi$ )     | -68.895                     | 3.439                      | 144.668                         | 0                                      | 0.008                            | 0                                   |
| Model $H_{20}$ : RI-CLPM( $\omega, \psi$ )     | -57.132                     | 3.237                      | 120.737                         | 0                                      | 0.01                             | 0                                   |
| Model $H_{21}$ : RI-CLPM( $\epsilon, \zeta$ )  | -51.546                     | 3.807                      | 110.706                         | 0                                      | 0.006                            | 0                                   |
| Model $H_{22}$ : RI-CLPM( $\epsilon, \eta$ )   | -41.082                     | 3.78                       | 89.725                          | 0                                      | 0.006                            | 0                                   |
| Model $H_{23}$ : RI-CLPM( $\epsilon, \chi$ )   | -51.49                      | 4.185                      | 111.351                         | 0                                      | 0.004                            | 0                                   |
| Model $H_{24}$ : RI-CLPM( $\epsilon, \psi$ )   | -47.143                     | 3.683                      | 101.651                         | 0                                      | 0.006                            | 0                                   |
| Model $H_{25}$ : RI-CLPM( $\zeta, \eta$ )      | -30.992                     | 3.453                      | 68.89                           | 0                                      | 0.008                            | 0                                   |
| Model $H_{26}$ : RI-CLPM( $\zeta, \chi$ )      | -44.024                     | 3.757                      | 95.562                          | 0                                      | 0.006                            | 0                                   |
| Model $H_{27}$ : RI-CLPM( $\zeta, \psi$ )      | -31.047                     | 3.614                      | 69.323                          | 0                                      | 0.007                            | 0                                   |
| Model $H_{28}$ : RI-CLPM( $\eta, \chi$ )       | -31.08                      | 3.947                      | 70.055                          | 0                                      | 0.005                            | 0                                   |
| Model $H_{29}$ : RI-CLPM( $\eta, \psi$ )       | -24.502                     | 3.484                      | 55.972                          | 0                                      | 0.008                            | 0                                   |
| Model $H_{30}$ : RI-CLPM( $\chi, \psi$ )       | -38.852                     | 3.789                      | 85.282                          | 0                                      | 0.006                            | 0                                   |

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**Table 3:** (continued)

| Model  | log-likelihood<br>( $L_m$ ) | penalty term<br>( $PT_m$ ) | GORICA values<br>( $GORICA_m$ ) | log-likelihood weight<br>( $L_{w_m}$ ) | penalty weight<br>( $PT_{w_m}$ ) | GORICA weight<br>( $GORICA_{w_m}$ ) |
|--|-----------------------------|----------------------------|---------------------------------|--|----------------------------------|-------------------------------------|
| <b>RI-CLPM with three RIs</b>                          |                             |                            |                                 |  |                                  |                                     |
| Model $H_{31}$ : RI-CLPM( $\kappa, \omega, \epsilon$ ) | -77.997                     | 3.428                      | 162.85                          | 0                                      | 0.008                            | 0                                   |
| Model $H_{32}$ : RI-CLPM( $\kappa, \omega, \zeta$ )    | -64.567                     | 3.521                      | 136.176                         | 0                                      | 0.007                            | 0                                   |
| Model $H_{33}$ : RI-CLPM( $\kappa, \omega, \eta$ )     | -48.662                     | 3.668                      | 104.66                          | 0                                      | 0.006                            | 0                                   |
| Model $H_{34}$ : RI-CLPM( $\kappa, \omega, \chi$ )     | -71.448                     | 3.394                      | 149.684                         | 0                                      | 0.008                            | 0                                   |
| Model $H_{35}$ : RI-CLPM( $\kappa, \omega, \psi$ )     | -57.347                     | 3.608                      | 121.91                          | 0                                      | 0.007                            | 0                                   |
| Model $H_{36}$ : RI-CLPM( $\kappa, \epsilon, \zeta$ )  | -58.623                     | 3.298                      | 123.842                         | 0                                      | 0.009                            | 0                                   |
| Model $H_{37}$ : RI-CLPM( $\kappa, \epsilon, \eta$ )   | -46.762                     | 3.145                      | 99.815                          | 0                                      | 0.011                            | 0                                   |
| Model $H_{38}$ : RI-CLPM( $\kappa, \epsilon, \chi$ )   | -65.409                     | 3.234                      | 137.287                         | 0                                      | 0.01                             | 0                                   |
| Model $H_{39}$ : RI-CLPM( $\kappa, \epsilon, \psi$ )   | -52.371                     | 3.219                      | 111.181                         | 0                                      | 0.01                             | 0                                   |
| Model $H_{40}$ : RI-CLPM( $\kappa, \zeta, \eta$ )      | -33.031                     | 3.142                      | 72.346                          | 0                                      | 0.011                            | 0                                   |
| Model $H_{41}$ : RI-CLPM( $\kappa, \zeta, \chi$ )      | -52.36                      | 3.168                      | 111.055                         | 0                                      | 0.01                             | 0                                   |
| Model $H_{42}$ : RI-CLPM( $\kappa, \zeta, \psi$ )      | -31.693                     | 3.463                      | 70.312                          | 0                                      | 0.008                            | 0                                   |
| Model $H_{43}$ : RI-CLPM( $\kappa, \eta, \chi$ )       | -37.611                     | 3.226                      | 81.674                          | 0                                      | 0.01                             | 0                                   |
| Model $H_{44}$ : RI-CLPM( $\kappa, \eta, \psi$ )       | -25.408                     | 3.213                      | 57.242                          | 0                                      | 0.01                             | 0                                   |
| Model $H_{45}$ : RI-CLPM( $\kappa, \chi, \psi$ )       | -44.988                     | 3.245                      | 96.466                          | 0                                      | 0.01                             | 0                                   |
| Model $H_{46}$ : RI-CLPM( $\omega, \epsilon, \zeta$ )  | -63.137                     | 3.219                      | 132.713                         | 0                                      | 0.01                             | 0                                   |
| Model $H_{47}$ : RI-CLPM( $\omega, \epsilon, \eta$ )   | -47.05                      | 3.374                      | 100.847                         | 0                                      | 0.009                            | 0                                   |

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**Table 3:** (continued)

| Model  | log-likelihood<br>( $L_m$ ) | penalty term<br>( $PT_m$ ) | GORICA values<br>( $GORICA_m$ ) | log-likelihood weight<br>( $L_{w_m}$ ) | penalty weight<br>( $PT_{w_m}$ ) | GORICA weight<br>( $GORICA_{w_m}$ ) |
|--|-----------------------------|----------------------------|---------------------------------|--|----------------------------------|-------------------------------------|
| Model $H_{48}$ : RI-CLPM( $\omega, \epsilon, \chi$ ) | -68.479                     | 3.379                      | 143.717                         | 0                                      | 0.008                            | 0                                   |
| Model $H_{49}$ : RI-CLPM( $\omega, \epsilon, \psi$ ) | -56.889                     | 3.129                      | 120.036                         | 0                                      | 0.011                            | 0                                   |
| Model $H_{50}$ : RI-CLPM( $\omega, \zeta, \eta$ )    | -34.15                      | 3.181                      | 74.663                          | 0                                      | 0.01                             | 0                                   |
| Model $H_{51}$ : RI-CLPM( $\omega, \zeta, \chi$ )    | -56.759                     | 3.119                      | 119.756                         | 0                                      | 0.011                            | 0                                   |
| Model $H_{52}$ : RI-CLPM( $\omega, \zeta, \psi$ )    | -35.762                     | 3.183                      | 77.889                          | 0                                      | 0.01                             | 0                                   |
| Model $H_{53}$ : RI-CLPM( $\omega, \eta, \chi$ )     | -37.466                     | 3.486                      | 81.905                          | 0                                      | 0.008                            | 0                                   |
| Model $H_{54}$ : RI-CLPM( $\omega, \eta, \psi$ )     | -26.445                     | 3.24                       | 59.371                          | 0                                      | 0.01                             | 0                                   |
| Model $H_{55}$ : RI-CLPM( $\omega, \chi, \psi$ )     | -49.447                     | 3.184                      | 105.264                         | 0                                      | 0.01                             | 0                                   |
| Model $H_{56}$ : RI-CLPM( $\epsilon, \zeta, \eta$ )  | -30.019                     | 3.488                      | 67.015                          | 0                                      | 0.008                            | 0                                   |
| Model $H_{57}$ : RI-CLPM( $\epsilon, \zeta, \chi$ )  | -43.12                      | 3.819                      | 93.878                          | 0                                      | 0.005                            | 0                                   |
| Model $H_{58}$ : RI-CLPM( $\epsilon, \zeta, \psi$ )  | -30.099                     | 3.627                      | 67.452                          | 0                                      | 0.007                            | 0                                   |
| Model $H_{59}$ : RI-CLPM( $\epsilon, \eta, \chi$ )   | -30.524                     | 3.89                       | 68.829                          | 0                                      | 0.005                            | 0                                   |
| Model $H_{60}$ : RI-CLPM( $\epsilon, \eta, \psi$ )   | -24.16                      | 3.382                      | 55.084                          | 0                                      | 0.008                            | 0                                   |
| Model $H_{61}$ : RI-CLPM( $\epsilon, \chi, \psi$ )   | -38.489                     | 3.714                      | 84.405                          | 0                                      | 0.006                            | 0                                   |
| Model $H_{62}$ : RI-CLPM( $\zeta, \eta, \chi$ )      | -20.71                      | 3.508                      | 48.437                          | 0                                      | 0.007                            | 0                                   |
| Model $H_{63}$ : RI-CLPM( $\zeta, \eta, \psi$ )      | -3.02                       | 3.343                      | 12.726                          | 0                                      | 0.009                            | 0                                   |
| Model $H_{64}$ : RI-CLPM( $\zeta, \chi, \psi$ )      | -22.715                     | 3.591                      | 52.611                          | 0                                      | 0.007                            | 0                                   |
| Model $H_{65}$ : RI-CLPM( $\eta, \chi, \psi$ )       | -13.709                     | 3.558                      | 34.533                          | 0                                      | 0.007                            | 0                                   |

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**Table 3:** (continued)

| Model   | log-likelihood<br>( $L_m$ ) | penalty term<br>( $PT_m$ ) | GORICA values<br>( $GORICA_m$ ) | log-likelihood weight<br>( $L_{w_m}$ ) | penalty weight<br>( $PT_{w_m}$ ) | GORICA weight<br>( $GORICA_{w_m}$ ) |
|---|-----------------------------|----------------------------|---------------------------------|--|----------------------------------|-------------------------------------|
| <b>RI-CLPM with four RIs</b>                                  |                             |                            |                                 |  |                                  |                                     |
| Model $H_{66}$ : RI-CLPM( $\kappa, \omega, \epsilon, \zeta$ ) | -63.7                       | 3.557                      | 134.515                         | 0                                      | 0.007                            | 0                                   |
| Model $H_{67}$ : RI-CLPM( $\kappa, \omega, \epsilon, \eta$ )  | -48.284                     | 3.591                      | 103.75                          | 0                                      | 0.007                            | 0                                   |
| Model $H_{68}$ : RI-CLPM( $\kappa, \omega, \epsilon, \chi$ )  | -71.063                     | 3.343                      | 148.813                         | 0                                      | 0.009                            | 0                                   |
| Model $H_{69}$ : RI-CLPM( $\kappa, \omega, \epsilon, \psi$ )  | -57.11                      | 3.508                      | 121.237                         | 0                                      | 0.007                            | 0                                   |
| Model $H_{70}$ : RI-CLPM( $\kappa, \omega, \zeta, \eta$ )     | -34.299                     | 3.714                      | 76.025                          | 0                                      | 0.006                            | 0                                   |
| Model $H_{71}$ : RI-CLPM( $\kappa, \omega, \zeta, \chi$ )     | -57.582                     | 3.382                      | 121.928                         | 0                                      | 0.008                            | 0                                   |
| Model $H_{72}$ : RI-CLPM( $\kappa, \omega, \zeta, \psi$ )     | -35.302                     | 3.89                       | 78.384                          | 0                                      | 0.005                            | 0                                   |
| Model $H_{73}$ : RI-CLPM( $\kappa, \omega, \eta, \chi$ )      | -39.063                     | 3.627                      | 85.379                          | 0                                      | 0.007                            | 0                                   |
| Model $H_{74}$ : RI-CLPM( $\kappa, \omega, \eta, \psi$ )      | -26.45                      | 3.819                      | 60.538                          | 0                                      | 0.005                            | 0                                   |
| Model $H_{75}$ : RI-CLPM( $\kappa, \omega, \chi, \psi$ )      | -49.813                     | 3.488                      | 106.602                         | 0                                      | 0.008                            | 0                                   |
| Model $H_{76}$ : RI-CLPM( $\kappa, \epsilon, \zeta, \eta$ )   | -31.953                     | 3.184                      | 70.275                          | 0                                      | 0.01                             | 0                                   |
| Model $H_{77}$ : RI-CLPM( $\kappa, \epsilon, \zeta, \chi$ )   | -51.316                     | 3.24                       | 109.113                         | 0                                      | 0.01                             | 0                                   |
| Model $H_{78}$ : RI-CLPM( $\kappa, \epsilon, \zeta, \psi$ )   | -30.684                     | 3.486                      | 68.342                          | 0                                      | 0.008                            | 0                                   |
| Model $H_{79}$ : RI-CLPM( $\kappa, \epsilon, \eta, \chi$ )    | -37.052                     | 3.183                      | 80.47                           | 0                                      | 0.01                             | 0                                   |
| Model $H_{80}$ : RI-CLPM( $\kappa, \epsilon, \eta, \psi$ )    | -25.061                     | 3.119                      | 56.361                          | 0                                      | 0.011                            | 0                                   |
| Model $H_{81}$ : RI-CLPM( $\kappa, \epsilon, \chi, \psi$ )    | -44.645                     | 3.181                      | 95.652                          | 0                                      | 0.01                             | 0                                   |
| Model $H_{82}$ : RI-CLPM( $\kappa, \zeta, \eta, \chi$ )       | -23.255                     | 3.129                      | 52.767                          | 0                                      | 0.011                            | 0                                   |

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**Table 3:** (continued)

| Model   | log-likelihood<br>( $L_m$ ) | penalty term<br>( $PT_m$ ) | GORICA values<br>( $GORICA_m$ ) | log-likelihood weight<br>( $L_{w_m}$ ) | penalty weight<br>( $PT_{w_m}$ ) | GORICA weight<br>( $GORICA_{w_m}$ ) |
|---|-----------------------------|----------------------------|---------------------------------|--|----------------------------------|-------------------------------------|
| Model $H_{83}$ : RI-CLPM( $\kappa, \zeta, \eta, \psi$ )     | -2.414                      | 3.379                      | 11.588                          | 0                                      | 0.008                            | 0                                   |
| Model $H_{84}$ : RI-CLPM( $\kappa, \zeta, \chi, \psi$ )     | -23.701                     | 3.374                      | 54.15                           | 0                                      | 0.009                            | 0                                   |
| Model $H_{85}$ : RI-CLPM( $\kappa, \eta, \chi, \psi$ )      | -14.922                     | 3.219                      | 36.282                          | 0                                      | 0.01                             | 0                                   |
| Model $H_{86}$ : RI-CLPM( $\omega, \epsilon, \zeta, \eta$ ) | -33.021                     | 3.245                      | 72.532                          | 0                                      | 0.01                             | 0                                   |
| Model $H_{87}$ : RI-CLPM( $\omega, \epsilon, \zeta, \chi$ ) | -55.635                     | 3.213                      | 117.696                         | 0                                      | 0.01                             | 0                                   |
| Model $H_{88}$ : RI-CLPM( $\omega, \epsilon, \zeta, \psi$ ) | -34.666                     | 3.226                      | 75.784                          | 0                                      | 0.01                             | 0                                   |
| Model $H_{89}$ : RI-CLPM( $\omega, \epsilon, \eta, \chi$ )  | -36.839                     | 3.463                      | 80.604                          | 0                                      | 0.008                            | 0                                   |
| Model $H_{90}$ : RI-CLPM( $\omega, \epsilon, \eta, \psi$ )  | -26.071                     | 3.168                      | 58.477                          | 0                                      | 0.01                             | 0                                   |
| Model $H_{91}$ : RI-CLPM( $\omega, \epsilon, \chi, \psi$ )  | -49.049                     | 3.142                      | 104.381                         | 0                                      | 0.011                            | 0                                   |
| Model $H_{92}$ : RI-CLPM( $\omega, \zeta, \eta, \chi$ )     | -24.132                     | 3.219                      | 54.703                          | 0                                      | 0.01                             | 0                                   |
| Model $H_{93}$ : RI-CLPM( $\omega, \zeta, \eta, \psi$ )     | -3.693                      | 3.234                      | 13.855                          | 0                                      | 0.01                             | 0                                   |
| Model $H_{94}$ : RI-CLPM( $\omega, \zeta, \chi, \psi$ )     | -27.811                     | 3.146                      | 61.914                          | 0                                      | 0.011                            | 0                                   |
| Model $H_{95}$ : RI-CLPM( $\omega, \eta, \chi, \psi$ )      | -15.819                     | 3.298                      | 38.235                          | 0                                      | 0.009                            | 0                                   |
| Model $H_{96}$ : RI-CLPM( $\epsilon, \zeta, \eta, \chi$ )   | -19.38                      | 3.608                      | 45.976                          | 0                                      | 0.007                            | 0                                   |
| Model $H_{97}$ : RI-CLPM( $\epsilon, \zeta, \eta, \psi$ )   | -1.654                      | 3.394                      | 10.096                          | 0                                      | 0.008                            | 0                                   |
| Model $H_{98}$ : RI-CLPM( $\epsilon, \zeta, \chi, \psi$ )   | -21.469                     | 3.668                      | 50.274                          | 0                                      | 0.006                            | 0                                   |
| Model $H_{99}$ : RI-CLPM( $\epsilon, \eta, \chi, \psi$ )    | -13.137                     | 3.521                      | 33.316                          | 0                                      | 0.007                            | 0                                   |
| Model $H_{100}$ : RI-CLPM( $\zeta, \eta, \chi, \psi$ )      | 8.052                       | 3.428                      | -9.247                          | 0.029                                  | 0.008                            | 0.038                               |

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**Table 3:** (continued)

| Model  | log-likelihood<br>( $L_m$ ) | penalty term<br>( $PT_m$ ) | GORICA values<br>( $GORICA_m$ ) | log-likelihood weight<br>( $L_{w_m}$ ) | penalty weight<br>( $PT_{w_m}$ ) | GORICA weight<br>( $GORICA_{w_m}$ ) |
|--|-----------------------------|----------------------------|---------------------------------|--|----------------------------------|-------------------------------------|
| <b>RI-CLPM with five RIs</b>   |                             |                            |                                 |  |                                  |                                     |
| Model $H_{101}$ : RI-CLPM( $\kappa, \omega, \epsilon, \zeta, \eta$ ) | -33.16                      | 3.789                      | 73.898                          | 0                                      | 0.006                            | 0                                   |
| Model $H_{102}$ : RI-CLPM( $\kappa, \omega, \epsilon, \zeta, \chi$ ) | -56.444                     | 3.484                      | 119.856                         | 0                                      | 0.008                            | 0                                   |
| Model $H_{103}$ : RI-CLPM( $\kappa, \omega, \epsilon, \zeta, \psi$ ) | -34.182                     | 3.947                      | 76.259                          | 0                                      | 0.005                            | 0                                   |
| Model $H_{104}$ : RI-CLPM( $\kappa, \omega, \epsilon, \eta, \chi$ )  | -38.463                     | 3.614                      | 84.154                          | 0                                      | 0.007                            | 0                                   |
| Model $H_{105}$ : RI-CLPM( $\kappa, \omega, \epsilon, \eta, \psi$ )  | -26.076                     | 3.757                      | 59.667                          | 0                                      | 0.006                            | 0                                   |
| Model $H_{106}$ : RI-CLPM( $\kappa, \omega, \epsilon, \chi, \psi$ )  | -49.426                     | 3.453                      | 105.758                         | 0                                      | 0.008                            | 0                                   |
| Model $H_{107}$ : RI-CLPM( $\kappa, \omega, \zeta, \eta, \chi$ )     | -24.425                     | 3.683                      | 56.216                          | 0                                      | 0.006                            | 0                                   |
| Model $H_{108}$ : RI-CLPM( $\kappa, \omega, \zeta, \eta, \psi$ )     | -2.421                      | 4.185                      | 13.212                          | 0                                      | 0.004                            | 0                                   |
| Model $H_{109}$ : RI-CLPM( $\kappa, \omega, \zeta, \chi, \psi$ )     | -27.518                     | 3.78                       | 62.596                          | 0                                      | 0.006                            | 0                                   |
| Model $H_{110}$ : RI-CLPM( $\kappa, \omega, \eta, \chi, \psi$ )      | -15.865                     | 3.807                      | 39.344                          | 0                                      | 0.006                            | 0                                   |
| Model $H_{111}$ : RI-CLPM( $\kappa, \epsilon, \zeta, \eta, \chi$ )   | -21.797                     | 3.237                      | 50.067                          | 0                                      | 0.01                             | 0                                   |
| Model $H_{112}$ : RI-CLPM( $\kappa, \epsilon, \zeta, \eta, \psi$ )   | -0.952                      | 3.439                      | 8.783                           | 0                                      | 0.008                            | 0                                   |
| Model $H_{113}$ : RI-CLPM( $\kappa, \epsilon, \zeta, \chi, \psi$ )   | -22.376                     | 3.463                      | 51.678                          | 0                                      | 0.008                            | 0                                   |
| Model $H_{114}$ : RI-CLPM( $\kappa, \epsilon, \eta, \chi, \psi$ )    | -14.348                     | 3.191                      | 35.077                          | 0                                      | 0.01                             | 0                                   |
| Model $H_{115}$ : RI-CLPM( $\kappa, \zeta, \eta, \chi, \psi$ )       | 8.46                        | 3.4                        | -10.121                         | 0.043                                  | 0.008                            | 0.059                               |
| Model $H_{116}$ : RI-CLPM( $\omega, \epsilon, \zeta, \eta, \chi$ )   | -22.617                     | 3.349                      | 51.931                          | 0                                      | 0.009                            | 0                                   |
| Model $H_{117}$ : RI-CLPM( $\omega, \epsilon, \zeta, \eta, \psi$ )   | -2.276                      | 3.314                      | 11.18                           | 0                                      | 0.009                            | 0                                   |

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**Table 3:** (continued)

| Model   | log-likelihood<br>( $L_m$ ) | penalty term<br>( $PT_m$ ) | GORICA values<br>( $GORICA_m$ ) | log-likelihood weight<br>( $L_{w_m}$ ) | penalty weight<br>( $PT_{w_m}$ ) | GORICA weight<br>( $GORICA_{w_m}$ ) |
|---|-----------------------------|----------------------------|---------------------------------|--|----------------------------------|-------------------------------------|
| Model $H_{118}$ : RI-CLPM( $\omega, \epsilon, \zeta, \chi, \psi$ )                                  | -26.387                     | 3.254                      | 59.282                          | 0                                      | 0.01                             | 0                                   |
| Model $H_{119}$ : RI-CLPM( $\omega, \epsilon, \eta, \chi, \psi$ )                                   | -15.207                     | 3.291                      | 36.996                          | 0                                      | 0.009                            | 0                                   |
| Model $H_{120}$ : RI-CLPM( $\omega, \zeta, \eta, \chi, \psi$ )                                      | 7.463                       | 3.308                      | -8.311                          | 0.016                                  | 0.009                            | 0.024                               |
| Model $H_{121}$ : RI-CLPM( $\epsilon, \zeta, \eta, \chi, \psi$ )                                    | 9.879                       | 3.544                      | -12.67                          | 0.179                                  | 0.007                            | 0.21                                |
| <b>RI-CLPM with six RIs</b>   |                             |                            |                                 |  |                                  |                                     |
| Model $H_{122}$ : RI-CLPM( $\kappa, \omega, \epsilon, \zeta, \eta, \chi$ )                          | -22.898                     | 3.823                      | 53.442                          | 0                                      | 0.005                            | 0                                   |
| Model $H_{123}$ : RI-CLPM( $\kappa, \omega, \epsilon, \zeta, \eta, \psi$ )                          | -0.952                      | 4.284                      | 10.473                          | 0                                      | 0.003                            | 0                                   |
| Model $H_{124}$ : RI-CLPM( $\kappa, \omega, \epsilon, \zeta, \chi, \psi$ )                          | -26.075                     | 3.902                      | 59.954                          | 0                                      | 0.005                            | 0                                   |
| Model $H_{125}$ : RI-CLPM( $\kappa, \omega, \epsilon, \eta, \chi, \psi$ )                           | -15.258                     | 3.81                       | 38.135                          | 0                                      | 0.006                            | 0                                   |
| Model $H_{126}$ : RI-CLPM( $\kappa, \omega, \zeta, \eta, \chi, \psi$ )                              | 8.443                       | 4.182                      | -8.521                          | 0.042                                  | 0.004                            | 0.026                               |
| <b>Model <math>H_{127}</math> : RI-CLPM(<math>\kappa, \epsilon, \zeta, \eta, \chi, \psi</math>)</b> | <b>10.376</b>               | <b>3.525</b>               | <b>-13.702</b>                  | <b>0.294</b>                           | <b>0.007</b>                     | <b>0.352*</b>                       |
| Model $H_{128}$ : RI-CLPM( $\omega, \epsilon, \zeta, \eta, \chi, \psi$ )                            | 9.347                       | 3.453                      | -11.789                         | 0.105                                  | 0.008                            | 0.135                               |