## Tables for paper Table 1

Table 1: Primary Results (N = 60)

| Design             | Level  | Parameter | Bias   | Pct Bias | MSE   | Coverage | CI Length | FMI   |
|--------------------|--------|-----------|--------|----------|-------|----------|-----------|-------|
|                    |        | γ6        | 0.042  | -1.817   | 0.018 | 0.988    | 0.702     | 0.002 |
|                    | Low    | $\beta_1$ | -0.071 | -25.122  | 0.269 | 0.983    | 2.534     | 0.236 |
|                    | Low    | $\beta_2$ | 0.008  | 1.253    | 0.024 | 0.932    | 0.585     | 0.000 |
|                    |        | $\beta_3$ | 0.000  | -0.886   | 0.000 | 0.944    | 0.017     | 0.001 |
|                    | Medium | γ⁄ο       | 0.039  | -1.684   | 0.018 | 0.990    | 0.709     | 0.011 |
| Split Form         |        | $\beta_1$ | -0.102 | -36.186  | 0.271 | 0.998    | 3.500     | 0.534 |
|                    |        | $\beta_2$ | 0.008  | 1.207    | 0.024 | 0.933    | 0.586     | 0.002 |
|                    |        | $\beta_3$ | 0.000  | -0.419   | 0.000 | 0.946    | 0.017     | 0.007 |
|                    |        | γ⁄ο       | 0.028  | -1.242   | 0.027 | 0.985    | 0.791     | 0.030 |
|                    | High   | $\beta_1$ | -0.107 | -38.054  | 0.418 | 0.988    | 4.268     | 0.630 |
|                    | nigii  | $\beta_2$ | 0.012  | 1.869    | 0.027 | 0.932    | 0.613     | 0.005 |
|                    |        | $\beta_3$ | 0.000  | -0.471   | 0.000 | 0.946    | 0.020     | 0.020 |
|                    | Low    | γ⁄ο       | 0.042  | -1.832   | 0.018 | 0.990    | 0.701     | 0.001 |
|                    |        | $\beta_1$ | -0.069 | -24.401  | 0.283 | 0.983    | 2.508     | 0.218 |
|                    |        | $\beta_2$ | 0.008  | 1.272    | 0.024 | 0.933    | 0.585     | 0.000 |
|                    |        | $\beta_3$ | 0.000  | -0.949   | 0.000 | 0.944    | 0.017     | 0.001 |
|                    | Medium | γ⁄ο       | 0.040  | -1.760   | 0.018 | 0.988    | 0.704     | 0.007 |
| Altered Split Form |        | $\beta_1$ | -0.117 | -41.573  | 0.277 | 0.990    | 3.385     | 0.508 |
| Altered Split Form |        | $\beta_2$ | 0.008  | 1.286    | 0.024 | 0.931    | 0.585     | 0.002 |
|                    |        | $\beta_3$ | 0.000  | -0.986   | 0.000 | 0.945    | 0.017     | 0.005 |
|                    | High   | γ⁄ο       | 0.036  | -1.592   | 0.021 | 0.989    | 0.742     | 0.022 |
|                    |        | $\beta_1$ | -0.158 | -56.111  | 0.394 | 0.992    | 4.336     | 0.662 |
|                    |        | $\beta_2$ | 0.012  | 1.809    | 0.026 | 0.934    | 0.601     | 0.006 |
|                    |        | $\beta_3$ | 0.000  | -1.487   | 0.000 | 0.941    | 0.018     | 0.021 |
|                    | Low    | γ⁄ο       | 0.040  | -1.765   | 0.018 | 0.988    | 0.703     | 0.005 |
| Wave Missingness   |        | $\beta_1$ | -0.094 | -33.425  | 0.238 | 0.993    | 2.995     | 0.433 |
|                    |        | $\beta_2$ | 0.008  | 1.251    | 0.024 | 0.934    | 0.585     | 0.001 |
|                    |        | $\beta_3$ | 0.000  | -0.875   | 0.000 | 0.943    | 0.017     | 0.002 |
|                    | Medium | γο        | 0.028  | -1.223   | 0.018 | 0.995    | 0.744     | 0.051 |
|                    |        | $\beta_1$ | -0.088 | -31.121  | 0.240 | 0.992    | 3.497     | 0.718 |
|                    |        | $\beta_2$ | 0.009  | 1.436    | 0.024 | 0.933    | 0.588     | 0.006 |
|                    |        | $\beta_3$ | 0.000  | -1.326   | 0.000 | 0.946    | 0.017     | 0.025 |
|                    | High   | γο        | -0.004 | 0.194    | 0.020 | 0.995    | 0.962     | 0.224 |
|                    |        | $\beta_1$ | -0.080 | -28.263  | 0.234 | 0.985    | 3.791     | 0.886 |
|                    |        | $\beta_2$ | 0.011  | 1.700    | 0.024 | 0.938    | 0.607     | 0.032 |
|                    |        | $\beta_3$ | 0.000  | -3.304   | 0.000 | 0.970    | 0.020     | 0.148 |

Table 2

Table 2: Increased Sample Size Results (N = 120)

| Design             | Level  | Parameter | Bias   | Pct Bias | MSE   | Coverage | CI Length | FMI   |
|--------------------|--------|-----------|--------|----------|-------|----------|-----------|-------|
|                    |        | γ⁄ο       | 0.013  | -0.577   | 0.008 | 0.985    | 0.424     | 0.001 |
|                    | Low    | $\beta_1$ | -0.041 | -14.633  | 0.134 | 0.975    | 1.690     | 0.183 |
|                    | Low    | $\beta_2$ | 0.006  | 0.867    | 0.007 | 0.944    | 0.319     | 0.000 |
|                    |        | $\beta_3$ | 0.000  | -0.868   | 0.000 | 0.954    | 0.012     | 0.000 |
|                    | Medium | γ⁄ο       | 0.012  | -0.544   | 0.008 | 0.985    | 0.429     | 0.009 |
| Split Form         |        | $\beta_1$ | -0.073 | -25.973  | 0.148 | 0.991    | 2.366     | 0.449 |
|                    |        | $\beta_2$ | 0.006  | 0.875    | 0.007 | 0.944    | 0.320     | 0.002 |
|                    |        | $\beta_3$ | 0.000  | -0.832   | 0.000 | 0.953    | 0.012     | 0.002 |
|                    |        | γ⁄0       | 0.004  | -0.179   | 0.011 | 0.973    | 0.465     | 0.025 |
|                    | High   | $\beta_1$ | -0.145 | -51.616  | 0.304 | 0.983    | 3.281     | 0.649 |
|                    | nigii  | $\beta_2$ | 0.007  | 1.136    | 0.008 | 0.939    | 0.332     | 0.005 |
|                    |        | $\beta_3$ | 0.000  | 0.243    | 0.000 | 0.944    | 0.013     | 0.010 |
|                    |        | γ⁄ο       | 0.013  | -0.576   | 0.008 | 0.984    | 0.425     | 0.002 |
|                    | Low    | $\beta_1$ | -0.032 | -11.186  | 0.129 | 0.980    | 1.677     | 0.173 |
| Altered Split Form | Low    | $\beta_2$ | 0.006  | 0.875    | 0.007 | 0.944    | 0.319     | 0.000 |
|                    |        | $\beta_3$ | 0.000  | -0.883   | 0.000 | 0.952    | 0.012     | 0.000 |
|                    | Medium | γο        | 0.013  | -0.553   | 0.008 | 0.983    | 0.426     | 0.005 |
|                    |        | $\beta_1$ | -0.058 | -20.672  | 0.145 | 0.996    | 2.250     | 0.414 |
|                    |        | $\beta_2$ | 0.006  | 0.879    | 0.007 | 0.944    | 0.319     | 0.001 |
|                    |        | $\beta_3$ | 0.000  | -0.917   | 0.000 | 0.951    | 0.012     | 0.002 |
|                    | High   | γ⁄ο       | 0.011  | -0.465   | 0.008 | 0.986    | 0.434     | 0.017 |
|                    |        | $\beta_1$ | -0.112 | -39.796  | 0.228 | 0.994    | 3.245     | 0.691 |
|                    |        | $\beta_2$ | 0.006  | 0.886    | 0.007 | 0.940    | 0.321     | 0.004 |
|                    |        | $\beta_3$ | 0.000  | -1.054   | 0.000 | 0.952    | 0.012     | 0.009 |
|                    | Low    | γο        | 0.013  | -0.575   | 0.008 | 0.985    | 0.426     | 0.004 |
| Wave Missingness   |        | $\beta_1$ | -0.064 | -22.793  | 0.137 | 0.987    | 2.064     | 0.342 |
|                    |        | $\beta_2$ | 0.005  | 0.832    | 0.007 | 0.944    | 0.319     | 0.001 |
|                    |        | $\beta_3$ | 0.000  | -0.906   | 0.000 | 0.952    | 0.012     | 0.001 |
|                    | Medium | γ⁄ο       | 0.010  | -0.453   | 0.008 | 0.984    | 0.435     | 0.023 |
|                    |        | $\beta_1$ | -0.082 | -29.029  | 0.184 | 0.994    | 2.979     | 0.630 |
|                    |        | $\beta_2$ | 0.006  | 0.890    | 0.007 | 0.943    | 0.320     | 0.004 |
|                    |        | $\beta_3$ | 0.000  | -0.959   | 0.000 | 0.954    | 0.012     | 0.008 |
|                    | High   | γο        | -0.010 | 0.428    | 0.010 | 0.988    | 0.554     | 0.179 |
|                    |        | $\beta_1$ | -0.059 | -21.087  | 0.297 | 0.970    | 3.760     | 0.859 |
|                    |        | $\beta_2$ | 0.008  | 1.204    | 0.007 | 0.952    | 0.334     | 0.040 |
|                    |        | $\beta_3$ | 0.000  | -2.426   | 0.000 | 0.955    | 0.014     | 0.105 |

Table 3

Table 3: High Time Results (N = 60)

| Design             | Level  | Parameter      | Bias   | Pct Bias | MSE   | Coverage | CI Length | FMI   |
|--------------------|--------|----------------|--------|----------|-------|----------|-----------|-------|
|                    |        | <b>%</b>       | -0.023 | 0.498    | 0.120 | 0.968    | 1.414     | 0.018 |
|                    | Low    | $\beta_1$      | 0.604  | 429.053  | 0.669 | 0.973    | 4.812     | 0.271 |
|                    | Low    | $\beta_2$      | 0.010  | 3.263    | 0.048 | 0.955    | 0.827     | 0.003 |
|                    |        | $\beta_3$      | 0.000  | -2.671   | 0.000 | 0.945    | 0.039     | 0.004 |
|                    | Medium | <b>%</b>       | -0.048 | 1.060    | 0.128 | 0.972    | 1.506     | 0.059 |
| Split Form         |        | $\beta_1$      | 0.724  | 513.940  | 0.898 | 0.988    | 5.933     | 0.499 |
| Spin roini         |        | $\beta_2$      | 0.025  | 7.927    | 0.047 | 0.958    | 0.834     | 0.013 |
|                    |        | $\beta_3$      | 0.000  | -2.867   | 0.000 | 0.938    | 0.039     | 0.017 |
|                    |        | γ <sub>0</sub> | -0.178 | 3.882    | 0.370 | 0.984    | 2.050     | 0.132 |
|                    | Uiah   | $\beta_1$      | 0.997  | 708.287  | 1.573 | 0.955    | 6.822     | 0.610 |
|                    | High   | $\beta_2$      | 0.044  | 13.650   | 0.060 | 0.965    | 0.966     | 0.036 |
|                    |        | $\beta_3$      | 0.000  | -0.787   | 0.000 | 0.955    | 0.048     | 0.060 |
|                    |        | γο             | -0.019 | 0.415    | 0.119 | 0.966    | 1.401     | 0.011 |
|                    | Low    | $\beta_1$      | 0.603  | 428.601  | 0.638 | 0.966    | 4.616     | 0.239 |
|                    |        | $\beta_2$      | 0.014  | 4.254    | 0.048 | 0.956    | 0.827     | 0.002 |
|                    |        | $\beta_3$      | 0.000  | -3.004   | 0.000 | 0.944    | 0.039     | 0.003 |
| Altered Split Form | Medium | γο             | -0.045 | 0.988    | 0.124 | 0.978    | 1.493     | 0.053 |
|                    |        | $\beta_1$      | 0.728  | 517.389  | 0.879 | 0.974    | 5.976     | 0.504 |
|                    |        | $\beta_2$      | 0.024  | 7.437    | 0.051 | 0.954    | 0.838     | 0.011 |
|                    |        | $\beta_3$      | -0.001 | -4.550   | 0.000 | 0.946    | 0.039     | 0.018 |
|                    | High   | γο             | -0.117 | 2.557    | 0.196 | 0.984    | 1.759     | 0.112 |
|                    |        | $\beta_1$      | 0.876  | 622.327  | 1.305 | 0.968    | 6.913     | 0.650 |
|                    |        | $\beta_2$      | 0.026  | 8.265    | 0.051 | 0.963    | 0.892     | 0.034 |
|                    |        | $\beta_3$      | -0.001 | -5.340   | 0.000 | 0.949    | 0.043     | 0.055 |
| Wave Missingness   | Low    | γο             | -0.057 | 1.249    | 0.127 | 0.968    | 1.454     | 0.038 |
|                    |        | $\beta_1$      | 0.853  | 606.148  | 1.003 | 0.974    | 5.629     | 0.510 |
|                    |        | $\beta_2$      | 0.006  | 1.804    | 0.046 | 0.959    | 0.831     | 0.006 |
|                    |        | $\beta_3$      | 0.000  | -3.051   | 0.000 | 0.945    | 0.039     | 0.011 |
|                    | Medium | γο             | -0.182 | 3.981    | 0.166 | 0.979    | 1.813     | 0.183 |
|                    |        | $\beta_1$      | 0.979  | 695.352  | 1.325 | 0.967    | 6.758     | 0.782 |
|                    |        | $\beta_2$      | 0.020  | 6.425    | 0.050 | 0.956    | 0.871     | 0.037 |
|                    |        | $\beta_3$      | -0.001 | -4.466   | 0.000 | 0.955    | 0.042     | 0.068 |
|                    | High   | γ <sub>0</sub> | -0.403 | 8.803    | 0.345 | 0.987    | 2.789     | 0.440 |
|                    |        | $\beta_1$      | 1.050  | 745.735  | 1.504 | 0.951    | 7.357     | 0.887 |
|                    |        | $\beta_2$      | 0.019  | 5.848    | 0.050 | 0.973    | 0.960     | 0.099 |
|                    |        | $\beta_3$      | -0.003 | -18.904  | 0.000 | 0.975    | 0.052     | 0.200 |

Table 4

Table 4: Low Inter-Survey Correlation Results (N = 60)

| Design             | Level  | Parameter          | Bias   | Pct Bias | MSE   | Coverage | CI Length | FMI   |
|--------------------|--------|--------------------|--------|----------|-------|----------|-----------|-------|
|                    |        | <b>%</b>           | 0.042  | -1.856   | 0.018 | 0.990    | 0.702     | 0.002 |
|                    | Low    | $\beta_1$          | -0.067 | -23.958  | 0.265 | 0.981    | 2.537     | 0.230 |
|                    | Low    | $\beta_2$          | 0.007  | 1.122    | 0.024 | 0.938    | 0.585     | 0.000 |
|                    |        | $\beta_3$          | 0.000  | -1.108   | 0.000 | 0.940    | 0.017     | 0.001 |
|                    | Medium | <b>%</b>           | 0.041  | -1.774   | 0.018 | 0.992    | 0.708     | 0.010 |
| Split Form         |        | $\beta_1$          | -0.103 | -36.645  | 0.281 | 0.991    | 3.492     | 0.535 |
| Spirt Form         |        | $eta_2$            | 0.008  | 1.183    | 0.024 | 0.934    | 0.586     | 0.002 |
|                    |        | $\beta_3$          | 0.000  | -1.031   | 0.000 | 0.939    | 0.017     | 0.006 |
|                    |        | γ <sub>0</sub>     | 0.034  | -1.488   | 0.026 | 0.990    | 0.794     | 0.030 |
|                    | High   | $\beta_1$          | -0.148 | -52.475  | 0.425 | 0.991    | 4.285     | 0.621 |
|                    | nign   | $\beta_2$          | 0.011  | 1.791    | 0.028 | 0.935    | 0.613     | 0.005 |
|                    |        | $\beta_3$          | 0.000  | -0.870   | 0.000 | 0.941    | 0.020     | 0.020 |
|                    |        | γ⁄ο                | 0.043  | -1.874   | 0.018 | 0.989    | 0.701     | 0.001 |
|                    | Low    | $\beta_1$          | -0.066 | -23.566  | 0.258 | 0.984    | 2.535     | 0.224 |
|                    |        | $oldsymbol{eta}_2$ | 0.007  | 1.116    | 0.024 | 0.935    | 0.585     | 0.000 |
|                    |        | $\beta_3$          | 0.000  | -1.202   | 0.000 | 0.939    | 0.017     | 0.001 |
|                    | Medium | γο                 | 0.041  | -1.782   | 0.018 | 0.988    | 0.706     | 0.009 |
| Altered Split Form |        | $\beta_1$          | -0.096 | -33.989  | 0.262 | 0.991    | 3.394     | 0.511 |
|                    |        | $\beta_2$          | 0.008  | 1.226    | 0.024 | 0.934    | 0.585     | 0.002 |
|                    |        | $\beta_3$          | 0.000  | -1.150   | 0.000 | 0.940    | 0.017     | 0.005 |
|                    | High   | γο                 | 0.036  | -1.573   | 0.020 | 0.986    | 0.738     | 0.023 |
|                    |        | $\beta_1$          | -0.174 | -61.685  | 0.380 | 0.991    | 4.350     | 0.669 |
|                    |        | $\beta_2$          | 0.010  | 1.639    | 0.025 | 0.937    | 0.598     | 0.005 |
|                    |        | $\beta_3$          | 0.000  | -0.961   | 0.000 | 0.949    | 0.018     | 0.024 |
|                    | Low    | γο                 | 0.041  | -1.790   | 0.018 | 0.989    | 0.703     | 0.005 |
| Wave Missingness   |        | $\beta_1$          | -0.084 | -29.806  | 0.242 | 0.994    | 2.967     | 0.423 |
|                    |        | $\beta_2$          | 0.007  | 1.141    | 0.024 | 0.936    | 0.585     | 0.001 |
|                    |        | $\beta_3$          | 0.000  | -1.100   | 0.000 | 0.940    | 0.017     | 0.002 |
|                    | Medium | 7/0                | 0.031  | -1.347   | 0.018 | 0.992    | 0.739     | 0.046 |
|                    |        | $\beta_1$          | -0.112 | -39.818  | 0.246 | 0.988    | 3.491     | 0.722 |
|                    |        | $\beta_2$          | 0.008  | 1.269    | 0.024 | 0.936    | 0.588     | 0.005 |
|                    |        | $\beta_3$          | 0.000  | -1.499   | 0.000 | 0.944    | 0.017     | 0.024 |
|                    | High   | γ <sub>0</sub>     | -0.003 | 0.133    | 0.022 | 0.996    | 0.985     | 0.237 |
|                    |        | $\beta_1$          | -0.094 | -33.488  | 0.233 | 0.988    | 3.875     | 0.887 |
|                    |        | $\beta_2$          | 0.010  | 1.616    | 0.025 | 0.941    | 0.608     | 0.033 |
|                    |        | $\beta_3$          | -0.001 | -3.529   | 0.000 | 0.964    | 0.021     | 0.160 |