

Estimates of SAUC with CR, 3 True Settings of c

$$(\tau_1^2, \tau_2^2) = (1, 4)$$

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Table 1: Estimates of SAUC when true $c_1 = c_2$

No.		True	$S = 25$		$S = 50$		$S = 200$	
			Median (Q1, Q3)	CR	Median (Q1, Q3)	CR	Median (Q1, Q3)	CR
1	Proposed (\hat{c}_1, \hat{c}_2)	0.564	0.591 (0.484, 0.670)	99.5	0.567 (0.493, 0.631)	99.9	0.563 (0.523, 0.607)	99.8
	Proposed ($c_1 = c_2$)		0.596 (0.503, 0.672)	99.9	0.582 (0.512, 0.639)	99.8	0.574 (0.537, 0.610)	98.9
	Proposed ($c_1 = 0$)		0.660 (0.593, 0.717)	83.7	0.658 (0.608, 0.699)	71.6	0.663 (0.641, 0.686)	24.9
	Reistma _O		0.676 (0.615, 0.727)	99.9	0.670 (0.629, 0.708)	99.9	0.673 (0.653, 0.692)	100.0
	Reistma _P		0.567 (0.517, 0.615)	99.9	0.563 (0.529, 0.595)	100.0	0.566 (0.546, 0.583)	100.0
2	Proposed (\hat{c}_1, \hat{c}_2)	0.620	0.634 (0.558, 0.702)	99.7	0.624 (0.566, 0.669)	99.5	0.619 (0.583, 0.651)	99.5
	Proposed ($c_1 = c_2$)		0.637 (0.566, 0.699)	99.5	0.631 (0.581, 0.679)	99.6	0.624 (0.595, 0.649)	98.9
	Proposed ($c_1 = 0$)		0.690 (0.633, 0.735)	83.9	0.692 (0.658, 0.721)	66.1	0.692 (0.675, 0.704)	21.2
	Reistma _O		0.699 (0.649, 0.739)	99.8	0.700 (0.664, 0.729)	99.9	0.697 (0.681, 0.711)	100.0
	Reistma _P		0.621 (0.579, 0.658)	99.8	0.619 (0.591, 0.648)	100.0	0.619 (0.605, 0.633)	99.9
3	Proposed (\hat{c}_1, \hat{c}_2)	0.828	0.840 (0.796, 0.873)	99.9	0.837 (0.799, 0.863)	99.7	0.830 (0.811, 0.846)	99.8
	Proposed ($c_1 = c_2$)		0.835 (0.795, 0.871)	99.8	0.836 (0.804, 0.863)	99.7	0.829 (0.813, 0.845)	99.9
	Proposed ($c_1 = 0$)		0.853 (0.819, 0.883)	98.0	0.858 (0.832, 0.877)	96.7	0.863 (0.850, 0.873)	87.6
	Reistma _O		0.872 (0.842, 0.892)	100.0	0.873 (0.852, 0.888)	99.7	0.872 (0.863, 0.880)	99.9
	Reistma _P		0.829 (0.799, 0.850)	100.0	0.826 (0.807, 0.845)	99.9	0.827 (0.819, 0.836)	100.0
4	Proposed (\hat{c}_1, \hat{c}_2)	0.846	0.852 (0.818, 0.877)	99.5	0.850 (0.827, 0.868)	99.5	0.848 (0.836, 0.859)	99.5
	Proposed ($c_1 = c_2$)		0.850 (0.819, 0.876)	99.4	0.850 (0.829, 0.868)	99.7	0.848 (0.837, 0.858)	100.0
	Proposed ($c_1 = 0$)		0.864 (0.838, 0.885)	97.5	0.866 (0.850, 0.880)	95.8	0.870 (0.861, 0.877)	82.5
	Reistma _O		0.873 (0.853, 0.892)	99.9	0.874 (0.861, 0.887)	99.8	0.876 (0.869, 0.882)	100.0
	Reistma _P		0.846 (0.824, 0.864)	100.0	0.845 (0.833, 0.858)	99.9	0.846 (0.839, 0.852)	100.0
5	Proposed (\hat{c}_1, \hat{c}_2)	0.892	0.891 (0.869, 0.909)	99.6	0.891 (0.875, 0.905)	99.6	0.892 (0.884, 0.899)	99.7
	Proposed ($c_1 = c_2$)		0.892 (0.872, 0.909)	99.6	0.893 (0.879, 0.905)	99.8	0.892 (0.885, 0.899)	99.2
	Proposed ($c_1 = 0$)		0.889 (0.862, 0.909)	99.4	0.893 (0.873, 0.907)	99.3	0.897 (0.888, 0.904)	98.3
	Reistma _O		0.904 (0.888, 0.919)	99.9	0.907 (0.897, 0.916)	100.0	0.908 (0.903, 0.913)	99.9
	Reistma _P		0.891 (0.873, 0.905)	99.8	0.891 (0.879, 0.901)	100.0	0.892 (0.886, 0.897)	99.9
6	Proposed (\hat{c}_1, \hat{c}_2)	0.877	0.877 (0.852, 0.896)	99.7	0.876 (0.861, 0.890)	99.8	0.878 (0.870, 0.885)	99.1
	Proposed ($c_1 = c_2$)		0.878 (0.858, 0.896)	99.5	0.879 (0.864, 0.892)	99.9	0.878 (0.872, 0.885)	99.6
	Proposed ($c_1 = 0$)		0.873 (0.848, 0.893)	99.0	0.877 (0.859, 0.891)	99.1	0.881 (0.871, 0.888)	97.3
	Reistma _O		0.888 (0.870, 0.903)	99.9	0.890 (0.877, 0.901)	99.8	0.891 (0.886, 0.896)	100.0
	Reistma _P		0.875 (0.858, 0.891)	100.0	0.877 (0.865, 0.889)	99.8	0.877 (0.872, 0.883)	100.0

Note:

Proposed (\hat{c}_1, \hat{c}_2) is the proposed model estimating (c_1, c_2) ; Proposed ($c_1 = c_2$) is the proposed model correctly specifying that $c_1 = c_2$; Proposed ($c_1 = 0$) is the proposed model misspecifying that $(c_1, c_2) = (1, 0)$; Reistma_O is Reitsma model based on the observed studies; and Reistma_P is Reitsma model based on the population studies.

Table 2: Estimates of SAUC when true $c_1 = 1$

No.		True	$S = 25$		$S = 50$		$S = 200$	
			Median (Q1, Q3)	CR	Median (Q1, Q3)	CR	Median (Q1, Q3)	CR
1	Proposed (\hat{c}_1, \hat{c}_2)	0.564	0.596 (0.523, 0.657)	99.6	0.570 (0.514, 0.624)	99.3	0.562 (0.532, 0.588)	98.0
	Proposed ($c_1 = 1$)		0.585 (0.520, 0.651)	99.8	0.573 (0.522, 0.622)	99.8	0.568 (0.541, 0.591)	99.0
	Proposed ($c_1 = c_2$)		0.621 (0.575, 0.672)	99.8	0.625 (0.588, 0.660)	99.5	0.644 (0.627, 0.661)	98.4
	Reistma _O		0.648 (0.606, 0.693)	100.0	0.648 (0.616, 0.677)	100.0	0.651 (0.635, 0.667)	100.0
	Reistma _P		0.567 (0.517, 0.615)	99.9	0.563 (0.529, 0.595)	100.0	0.566 (0.546, 0.583)	100.0
2	Proposed (\hat{c}_1, \hat{c}_2)	0.620	0.635 (0.569, 0.685)	99.9	0.626 (0.579, 0.667)	99.5	0.620 (0.600, 0.642)	98.6
	Proposed ($c_1 = 1$)		0.637 (0.579, 0.687)	99.7	0.630 (0.586, 0.665)	99.9	0.621 (0.604, 0.639)	99.7
	Proposed ($c_1 = c_2$)		0.653 (0.607, 0.695)	100.0	0.656 (0.622, 0.683)	99.7	0.666 (0.652, 0.681)	98.9
	Reistma _O		0.675 (0.637, 0.713)	100.0	0.674 (0.647, 0.700)	100.0	0.674 (0.662, 0.687)	100.0
	Reistma _P		0.621 (0.579, 0.658)	99.8	0.619 (0.591, 0.648)	100.0	0.619 (0.605, 0.633)	99.9
3	Proposed (\hat{c}_1, \hat{c}_2)	0.828	0.836 (0.800, 0.866)	99.6	0.834 (0.804, 0.857)	99.6	0.829 (0.814, 0.843)	99.1
	Proposed ($c_1 = 1$)		0.833 (0.798, 0.864)	99.9	0.832 (0.804, 0.856)	99.7	0.829 (0.816, 0.841)	99.9
	Proposed ($c_1 = c_2$)		0.845 (0.818, 0.870)	99.4	0.848 (0.829, 0.867)	99.3	0.852 (0.841, 0.861)	99.0
	Reistma _O		0.861 (0.838, 0.884)	100.0	0.862 (0.847, 0.878)	99.8	0.864 (0.856, 0.871)	99.8
	Reistma _P		0.829 (0.799, 0.850)	100.0	0.826 (0.807, 0.845)	99.9	0.827 (0.819, 0.836)	100.0
4	Proposed (\hat{c}_1, \hat{c}_2)	0.846	0.852 (0.828, 0.872)	99.6	0.851 (0.832, 0.867)	99.4	0.848 (0.838, 0.858)	99.4
	Proposed ($c_1 = 1$)		0.850 (0.823, 0.871)	99.5	0.851 (0.831, 0.865)	99.5	0.846 (0.837, 0.855)	99.5
	Proposed ($c_1 = c_2$)		0.857 (0.834, 0.874)	99.7	0.858 (0.842, 0.871)	99.8	0.860 (0.851, 0.868)	99.3
	Reistma _O		0.869 (0.849, 0.884)	100.0	0.870 (0.858, 0.882)	99.8	0.870 (0.864, 0.876)	99.8
	Reistma _P		0.846 (0.824, 0.864)	100.0	0.845 (0.833, 0.858)	99.9	0.846 (0.839, 0.852)	100.0
5	Proposed (\hat{c}_1, \hat{c}_2)	0.892	0.901 (0.883, 0.918)	99.1	0.899 (0.886, 0.912)	99.0	0.895 (0.886, 0.903)	95.4
	Proposed ($c_1 = 1$)		0.895 (0.870, 0.914)	99.4	0.893 (0.877, 0.908)	99.4	0.892 (0.884, 0.900)	99.9
	Proposed ($c_1 = c_2$)		0.908 (0.892, 0.923)	99.5	0.910 (0.900, 0.919)	99.3	0.912 (0.907, 0.917)	95.5
	Reistma _O		0.913 (0.897, 0.927)	100.0	0.915 (0.905, 0.923)	100.0	0.915 (0.911, 0.920)	99.9
	Reistma _P		0.891 (0.873, 0.905)	99.8	0.891 (0.879, 0.901)	100.0	0.892 (0.886, 0.897)	99.9
6	Proposed (\hat{c}_1, \hat{c}_2)	0.877	0.889 (0.867, 0.907)	99.2	0.887 (0.873, 0.900)	99.5	0.883 (0.873, 0.892)	97.9
	Proposed ($c_1 = 1$)		0.882 (0.855, 0.901)	99.3	0.879 (0.863, 0.895)	99.4	0.878 (0.870, 0.887)	99.8
	Proposed ($c_1 = c_2$)		0.895 (0.877, 0.911)	99.9	0.895 (0.884, 0.907)	99.3	0.896 (0.891, 0.902)	98.4
	Reistma _O		0.898 (0.880, 0.913)	99.9	0.899 (0.887, 0.910)	99.8	0.900 (0.895, 0.905)	99.7
	Reistma _P		0.875 (0.858, 0.891)	100.0	0.877 (0.865, 0.889)	99.8	0.877 (0.872, 0.883)	100.0

Note:

Proposed (\hat{c}_1, \hat{c}_2) is the proposed model estimating (c_1, c_2) ; Proposed ($c_1 = c_2$) is the proposed model correctly specifying that $c_1 = c_2$; Proposed ($c_1 = 1$) is the proposed model misspecifying that $(c_1, c_2) = (1, 0)$; Reistma_O is Reitsma model based on the observed studies; and Reistma_P is Reitsma model based on the population studies.

Table 3: Estimates of SAUC when true $c_1 = 0$

No.		True	$S = 25$		$S = 50$		$S = 200$	
			Median (Q1, Q3)	CR	Median (Q1, Q3)	CR	Median (Q1, Q3)	CR
1	Proposed (\hat{c}_1, \hat{c}_2)	0.564	0.475 (0.373, 0.596)	99.9	0.488 (0.398, 0.568)	99.1	0.533 (0.483, 0.571)	98.9
	Proposed ($c_1 = 0$)		0.563 (0.467, 0.656)	99.7	0.561 (0.499, 0.625)	99.7	0.562 (0.533, 0.593)	99.6
	Proposed ($c_1 = c_2$)		0.474 (0.362, 0.577)	99.7	0.476 (0.385, 0.560)	99.4	0.487 (0.439, 0.543)	99.1
	Reistma _O		0.568 (0.470, 0.663)	100.0	0.569 (0.502, 0.634)	99.9	0.569 (0.539, 0.601)	100.0
	Reistma _P		0.567 (0.517, 0.615)	99.9	0.563 (0.529, 0.595)	100.0	0.566 (0.546, 0.583)	100.0
2	Proposed (\hat{c}_1, \hat{c}_2)	0.620	0.562 (0.444, 0.647)	99.9	0.560 (0.484, 0.629)	100.0	0.593 (0.556, 0.624)	99.3
	Proposed ($c_1 = 0$)		0.621 (0.550, 0.687)	99.9	0.621 (0.568, 0.670)	99.8	0.619 (0.596, 0.640)	99.3
	Proposed ($c_1 = c_2$)		0.554 (0.447, 0.643)	99.9	0.554 (0.471, 0.620)	99.8	0.564 (0.507, 0.613)	98.8
	Reistma _O		0.631 (0.558, 0.696)	99.9	0.631 (0.578, 0.680)	100.0	0.632 (0.607, 0.654)	99.9
	Reistma _P		0.621 (0.579, 0.658)	99.8	0.619 (0.591, 0.648)	100.0	0.619 (0.605, 0.633)	99.9
3	Proposed (\hat{c}_1, \hat{c}_2)	0.828	0.797 (0.707, 0.848)	99.8	0.806 (0.742, 0.845)	99.3	0.818 (0.795, 0.836)	99.4
	Proposed ($c_1 = 0$)		0.828 (0.771, 0.864)	99.8	0.831 (0.796, 0.859)	99.0	0.827 (0.813, 0.842)	99.3
	Proposed ($c_1 = c_2$)		0.784 (0.690, 0.845)	99.6	0.789 (0.723, 0.838)	99.2	0.798 (0.763, 0.824)	99.7
	Reistma _O		0.831 (0.770, 0.867)	100.0	0.835 (0.796, 0.863)	99.7	0.831 (0.816, 0.846)	99.9
	Reistma _P		0.829 (0.799, 0.850)	100.0	0.826 (0.807, 0.845)	99.9	0.827 (0.819, 0.836)	100.0
4	Proposed (\hat{c}_1, \hat{c}_2)	0.846	0.825 (0.777, 0.864)	99.5	0.834 (0.799, 0.856)	99.9	0.841 (0.827, 0.853)	99.9
	Proposed ($c_1 = 0$)		0.844 (0.811, 0.873)	99.7	0.848 (0.824, 0.865)	99.9	0.846 (0.834, 0.856)	99.7
	Proposed ($c_1 = c_2$)		0.822 (0.771, 0.863)	99.9	0.826 (0.787, 0.854)	99.9	0.835 (0.813, 0.850)	99.5
	Reistma _O		0.850 (0.816, 0.878)	99.9	0.852 (0.829, 0.871)	100.0	0.852 (0.840, 0.862)	100.0
	Reistma _P		0.846 (0.824, 0.864)	100.0	0.845 (0.833, 0.858)	99.9	0.846 (0.839, 0.852)	100.0
5	Proposed (\hat{c}_1, \hat{c}_2)	0.892	0.878 (0.852, 0.897)	99.2	0.883 (0.863, 0.897)	99.6	0.890 (0.881, 0.896)	99.9
	Proposed ($c_1 = 0$)		0.888 (0.869, 0.904)	99.7	0.890 (0.878, 0.902)	99.6	0.892 (0.885, 0.898)	99.2
	Proposed ($c_1 = c_2$)		0.876 (0.849, 0.895)	99.6	0.880 (0.861, 0.895)	99.9	0.886 (0.876, 0.893)	99.5
	Reistma _O		0.888 (0.869, 0.905)	99.9	0.892 (0.879, 0.903)	100.0	0.893 (0.887, 0.899)	100.0
	Reistma _P		0.891 (0.873, 0.905)	99.8	0.891 (0.879, 0.901)	100.0	0.892 (0.886, 0.897)	99.9
6	Proposed (\hat{c}_1, \hat{c}_2)	0.877	0.865 (0.838, 0.885)	99.8	0.869 (0.851, 0.884)	99.8	0.875 (0.868, 0.882)	99.6
	Proposed ($c_1 = 0$)		0.874 (0.854, 0.892)	100.0	0.876 (0.862, 0.889)	99.8	0.877 (0.871, 0.883)	99.5
	Proposed ($c_1 = c_2$)		0.865 (0.839, 0.886)	99.9	0.869 (0.852, 0.884)	99.7	0.875 (0.867, 0.882)	99.7
	Reistma _O		0.877 (0.857, 0.894)	99.9	0.879 (0.865, 0.891)	100.0	0.880 (0.874, 0.886)	99.9
	Reistma _P		0.875 (0.858, 0.891)	100.0	0.877 (0.865, 0.889)	99.8	0.877 (0.872, 0.883)	100.0

Note:

Proposed (\hat{c}_1, \hat{c}_2) is the proposed model estimating (c_1, c_2) ; Proposed ($c_1 = c_2$) is the proposed model correctly specifying that $c_1 = c_2$; Proposed ($c_1 = 1$) is the proposed model misspecifying that $(c_1, c_2) = (1, 0)$; Reistma_O is Reitsma model based on the observed studies; and Reistma_P is Reitsma model based on the population studies.