

SAUC with CR, 3 True Settings of c

$$(\tau_1^2, \tau_2^2) = (0.5, 0.5)$$

Yi

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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)	0.620	0.644 (0.496, 0.734)	99.5	0.619 (0.514, 0.694)	99.4	0.623 (0.573, 0.665)	99.7
	Proposed ($c_1 = c_2$)		0.641 (0.492, 0.733)	99.7	0.627 (0.524, 0.697)	99.6	0.628 (0.580, 0.669)	99.7
	Proposed ($c_1 = 0$)		0.695 (0.595, 0.756)	87.5	0.684 (0.626, 0.732)	78.8	0.690 (0.662, 0.712)	36.4
	Reistma _O		0.697 (0.611, 0.760)	100.0	0.691 (0.640, 0.737)	100.0	0.695 (0.667, 0.716)	100.0
	Reistma _P		0.630 (0.537, 0.701)	100.0	0.618 (0.561, 0.668)	100.0	0.621 (0.594, 0.649)	100.0
2	Proposed (\hat{c}_1, \hat{c}_2)	0.702	0.711 (0.627, 0.769)	99.2	0.710 (0.656, 0.751)	99.5	0.703 (0.680, 0.727)	99.4
	Proposed ($c_1 = c_2$)		0.714 (0.630, 0.770)	99.6	0.709 (0.651, 0.753)	99.6	0.706 (0.679, 0.726)	99.9
	Proposed ($c_1 = 0$)		0.737 (0.683, 0.780)	87.6	0.737 (0.707, 0.769)	74.5	0.736 (0.719, 0.749)	35.9
	Reistma _O		0.741 (0.686, 0.782)	99.9	0.742 (0.710, 0.772)	100.0	0.740 (0.722, 0.753)	100.0
	Reistma _P		0.708 (0.651, 0.751)	100.0	0.705 (0.669, 0.735)	100.0	0.701 (0.685, 0.716)	100.0
3	Proposed (\hat{c}_1, \hat{c}_2)	0.846	0.847 (0.804, 0.873)	99.6	0.849 (0.817, 0.868)	98.9	0.847 (0.835, 0.859)	99.6
	Proposed ($c_1 = c_2$)		0.845 (0.796, 0.873)	99.1	0.847 (0.813, 0.869)	99.1	0.847 (0.834, 0.858)	99.1
	Proposed ($c_1 = 0$)		0.852 (0.815, 0.876)	99.1	0.855 (0.831, 0.873)	98.9	0.859 (0.849, 0.867)	96.7
	Reistma _O		0.865 (0.833, 0.884)	100.0	0.868 (0.848, 0.881)	99.9	0.870 (0.861, 0.876)	100.0
	Reistma _P		0.844 (0.810, 0.864)	100.0	0.844 (0.823, 0.860)	100.0	0.846 (0.836, 0.854)	100.0
4	Proposed (\hat{c}_1, \hat{c}_2)	0.864	0.863 (0.841, 0.877)	99.2	0.865 (0.851, 0.875)	98.3	0.865 (0.857, 0.870)	99.4
	Proposed ($c_1 = c_2$)		0.863 (0.841, 0.878)	98.9	0.865 (0.850, 0.875)	99.3	0.864 (0.857, 0.870)	99.5
	Proposed ($c_1 = 0$)		0.866 (0.846, 0.879)	99.2	0.868 (0.856, 0.877)	99.1	0.869 (0.864, 0.875)	96.2
	Reistma _O		0.873 (0.856, 0.885)	100.0	0.876 (0.866, 0.884)	100.0	0.877 (0.872, 0.881)	100.0
	Reistma _P		0.861 (0.845, 0.874)	100.0	0.863 (0.853, 0.872)	100.0	0.864 (0.859, 0.868)	100.0
5	Proposed (\hat{c}_1, \hat{c}_2)	0.877	0.869 (0.830, 0.894)	99.0	0.877 (0.853, 0.893)	99.5	0.878 (0.866, 0.889)	99.6
	Proposed ($c_1 = c_2$)		0.868 (0.831, 0.893)	99.3	0.876 (0.853, 0.892)	99.5	0.877 (0.864, 0.887)	99.5
	Proposed ($c_1 = 0$)		0.858 (0.813, 0.890)	98.9	0.867 (0.837, 0.887)	99.5	0.867 (0.853, 0.880)	99.6
	Reistma _O		0.873 (0.835, 0.900)	100.0	0.880 (0.856, 0.897)	100.0	0.881 (0.869, 0.891)	100.0
	Reistma _P		0.870 (0.836, 0.893)	100.0	0.877 (0.856, 0.892)	100.0	0.877 (0.866, 0.886)	100.0
6	Proposed (\hat{c}_1, \hat{c}_2)	0.835	0.833 (0.788, 0.869)	99.2	0.835 (0.805, 0.864)	99.0	0.838 (0.823, 0.853)	99.0
	Proposed ($c_1 = c_2$)		0.829 (0.785, 0.864)	99.7	0.834 (0.803, 0.860)	99.8	0.836 (0.822, 0.849)	99.6
	Proposed ($c_1 = 0$)		0.818 (0.775, 0.856)	98.9	0.823 (0.794, 0.851)	98.9	0.829 (0.815, 0.842)	99.4
	Reistma _O		0.832 (0.792, 0.867)	100.0	0.838 (0.811, 0.862)	100.0	0.843 (0.830, 0.855)	100.0
	Reistma _P		0.826 (0.786, 0.860)	100.0	0.832 (0.805, 0.855)	99.9	0.836 (0.822, 0.846)	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)	0.620	0.627 (0.508, 0.719)	99.9	0.624 (0.543, 0.687)	99.9	0.640 (0.605, 0.675)	99.7
	Proposed ($c_1 = 1$)		0.642 (0.520, 0.732)	99.8	0.627 (0.541, 0.693)	99.4	0.626 (0.586, 0.660)	99.9
	Proposed ($c_1 = c_2$)		0.629 (0.512, 0.721)	99.7	0.634 (0.561, 0.691)	99.7	0.656 (0.628, 0.684)	99.8
	Reistma _O		0.665 (0.560, 0.738)	100.0	0.658 (0.598, 0.707)	100.0	0.663 (0.637, 0.688)	100.0
	Reistma _P		0.630 (0.537, 0.701)	100.0	0.618 (0.561, 0.668)	100.0	0.621 (0.594, 0.649)	100.0
2	Proposed (\hat{c}_1, \hat{c}_2)	0.702	0.704 (0.620, 0.758)	99.6	0.705 (0.653, 0.743)	99.5	0.708 (0.687, 0.726)	99.7
	Proposed ($c_1 = 1$)		0.721 (0.643, 0.766)	99.4	0.711 (0.662, 0.747)	99.8	0.703 (0.683, 0.723)	99.3
	Proposed ($c_1 = c_2$)		0.706 (0.614, 0.761)	99.7	0.707 (0.657, 0.745)	99.6	0.712 (0.693, 0.729)	99.8
	Reistma _O		0.725 (0.657, 0.770)	100.0	0.721 (0.683, 0.754)	100.0	0.718 (0.700, 0.733)	100.0
	Reistma _P		0.708 (0.651, 0.751)	100.0	0.705 (0.669, 0.735)	100.0	0.701 (0.685, 0.716)	100.0
3	Proposed (\hat{c}_1, \hat{c}_2)	0.846	0.838 (0.788, 0.868)	99.0	0.843 (0.808, 0.865)	99.1	0.845 (0.831, 0.855)	99.4
	Proposed ($c_1 = 1$)		0.841 (0.796, 0.871)	99.4	0.846 (0.816, 0.864)	99.6	0.847 (0.834, 0.856)	99.6
	Proposed ($c_1 = c_2$)		0.840 (0.788, 0.870)	99.2	0.846 (0.808, 0.867)	99.4	0.849 (0.835, 0.860)	99.4
	Reistma _O		0.857 (0.820, 0.882)	100.0	0.861 (0.837, 0.876)	100.0	0.863 (0.853, 0.872)	100.0
	Reistma _P		0.844 (0.810, 0.864)	100.0	0.844 (0.823, 0.860)	100.0	0.846 (0.836, 0.854)	100.0
4	Proposed (\hat{c}_1, \hat{c}_2)	0.864	0.860 (0.837, 0.876)	99.1	0.862 (0.848, 0.874)	99.4	0.863 (0.858, 0.869)	99.6
	Proposed ($c_1 = 1$)		0.860 (0.839, 0.876)	99.7	0.864 (0.850, 0.874)	99.7	0.864 (0.858, 0.869)	99.7
	Proposed ($c_1 = c_2$)		0.861 (0.837, 0.876)	99.1	0.866 (0.851, 0.877)	99.3	0.867 (0.860, 0.873)	99.3
	Reistma _O		0.869 (0.850, 0.883)	100.0	0.874 (0.862, 0.883)	100.0	0.875 (0.871, 0.880)	100.0
	Reistma _P		0.861 (0.845, 0.874)	100.0	0.863 (0.853, 0.872)	100.0	0.864 (0.859, 0.868)	100.0
5	Proposed (\hat{c}_1, \hat{c}_2)	0.877	0.880 (0.840, 0.902)	99.1	0.885 (0.861, 0.901)	98.6	0.882 (0.869, 0.892)	99.1
	Proposed ($c_1 = 1$)		0.869 (0.823, 0.896)	98.8	0.878 (0.849, 0.896)	98.6	0.877 (0.864, 0.888)	99.0
	Proposed ($c_1 = c_2$)		0.881 (0.847, 0.903)	99.4	0.891 (0.868, 0.904)	99.2	0.892 (0.883, 0.900)	98.8
	Reistma _O		0.884 (0.845, 0.907)	100.0	0.892 (0.867, 0.907)	100.0	0.893 (0.884, 0.902)	100.0
	Reistma _P		0.870 (0.836, 0.893)	100.0	0.877 (0.856, 0.892)	100.0	0.877 (0.866, 0.886)	100.0
6	Proposed (\hat{c}_1, \hat{c}_2)	0.835	0.839 (0.785, 0.878)	98.6	0.843 (0.809, 0.874)	98.5	0.840 (0.824, 0.855)	99.5
	Proposed ($c_1 = 1$)		0.826 (0.775, 0.867)	98.7	0.833 (0.800, 0.861)	97.9	0.836 (0.821, 0.849)	99.2
	Proposed ($c_1 = c_2$)		0.844 (0.792, 0.881)	99.4	0.852 (0.817, 0.877)	99.7	0.853 (0.838, 0.865)	99.6
	Reistma _O		0.842 (0.791, 0.879)	100.0	0.849 (0.819, 0.875)	100.0	0.854 (0.841, 0.866)	100.0
	Reistma _P		0.826 (0.786, 0.860)	100.0	0.832 (0.805, 0.855)	99.9	0.836 (0.822, 0.846)	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)	0.620	0.559 (0.379, 0.701)	99.1	0.558 (0.435, 0.651)	99.0	0.595 (0.536, 0.640)	99.9
	Proposed ($c_1 = 0$)		0.632 (0.511, 0.727)	99.2	0.619 (0.540, 0.686)	99.5	0.624 (0.586, 0.657)	99.4
	Proposed ($c_1 = c_2$)		0.558 (0.362, 0.696)	99.7	0.536 (0.415, 0.643)	99.7	0.560 (0.496, 0.612)	99.2
	Reistma _O		0.637 (0.509, 0.734)	100.0	0.626 (0.542, 0.695)	100.0	0.629 (0.590, 0.664)	100.0
	Reistma _P		0.630 (0.537, 0.701)	100.0	0.618 (0.561, 0.668)	100.0	0.621 (0.594, 0.649)	100.0
2	Proposed (\hat{c}_1, \hat{c}_2)	0.702	0.683 (0.567, 0.755)	99.3	0.683 (0.607, 0.735)	99.0	0.688 (0.663, 0.712)	99.4
	Proposed ($c_1 = 0$)		0.709 (0.634, 0.762)	99.2	0.707 (0.658, 0.748)	99.2	0.702 (0.681, 0.721)	99.6
	Proposed ($c_1 = c_2$)		0.680 (0.535, 0.756)	99.7	0.677 (0.597, 0.736)	99.3	0.674 (0.644, 0.705)	99.4
	Reistma _O		0.715 (0.640, 0.770)	100.0	0.715 (0.666, 0.756)	100.0	0.709 (0.689, 0.728)	100.0
	Reistma _P		0.708 (0.651, 0.751)	100.0	0.705 (0.669, 0.735)	100.0	0.701 (0.685, 0.716)	100.0
3	Proposed (\hat{c}_1, \hat{c}_2)	0.846	0.828 (0.747, 0.862)	99.3	0.831 (0.780, 0.860)	99.5	0.839 (0.823, 0.854)	99.7
	Proposed ($c_1 = 0$)		0.842 (0.785, 0.868)	99.4	0.843 (0.810, 0.866)	99.0	0.846 (0.831, 0.858)	99.8
	Proposed ($c_1 = c_2$)		0.824 (0.733, 0.862)	99.6	0.824 (0.770, 0.857)	99.6	0.830 (0.807, 0.846)	99.8
	Reistma _O		0.845 (0.788, 0.873)	100.0	0.846 (0.811, 0.869)	99.8	0.850 (0.834, 0.861)	100.0
	Reistma _P		0.844 (0.810, 0.864)	100.0	0.844 (0.823, 0.860)	100.0	0.846 (0.836, 0.854)	100.0
4	Proposed (\hat{c}_1, \hat{c}_2)	0.864	0.854 (0.829, 0.872)	99.3	0.859 (0.841, 0.872)	99.2	0.861 (0.853, 0.868)	99.5
	Proposed ($c_1 = 0$)		0.861 (0.837, 0.876)	99.7	0.863 (0.849, 0.874)	99.5	0.864 (0.857, 0.869)	99.6
	Proposed ($c_1 = c_2$)		0.854 (0.823, 0.872)	99.0	0.857 (0.837, 0.871)	98.4	0.857 (0.849, 0.865)	99.2
	Reistma _O		0.864 (0.841, 0.879)	100.0	0.867 (0.853, 0.878)	100.0	0.868 (0.861, 0.873)	100.0
	Reistma _P		0.861 (0.845, 0.874)	100.0	0.863 (0.853, 0.872)	100.0	0.864 (0.859, 0.868)	100.0
5	Proposed (\hat{c}_1, \hat{c}_2)	0.877	0.839 (0.763, 0.877)	99.8	0.861 (0.825, 0.883)	99.7	0.871 (0.856, 0.883)	99.3
	Proposed ($c_1 = 0$)		0.860 (0.812, 0.888)	99.7	0.872 (0.845, 0.890)	99.5	0.877 (0.864, 0.886)	99.3
	Proposed ($c_1 = c_2$)		0.840 (0.772, 0.876)	99.9	0.863 (0.830, 0.884)	99.8	0.875 (0.860, 0.885)	100.0
	Reistma _O		0.846 (0.774, 0.882)	100.0	0.869 (0.835, 0.889)	100.0	0.876 (0.861, 0.886)	100.0
	Reistma _P		0.870 (0.836, 0.893)	100.0	0.877 (0.856, 0.892)	100.0	0.877 (0.866, 0.886)	100.0
6	Proposed (\hat{c}_1, \hat{c}_2)	0.835	0.807 (0.740, 0.850)	99.2	0.819 (0.778, 0.852)	99.7	0.825 (0.807, 0.842)	99.4
	Proposed ($c_1 = 0$)		0.823 (0.772, 0.860)	99.7	0.829 (0.795, 0.858)	99.5	0.835 (0.819, 0.849)	99.4
	Proposed ($c_1 = c_2$)		0.809 (0.746, 0.851)	99.9	0.821 (0.780, 0.853)	99.8	0.829 (0.811, 0.845)	99.7
	Reistma _O		0.809 (0.751, 0.853)	100.0	0.821 (0.782, 0.854)	100.0	0.830 (0.813, 0.845)	100.0
	Reistma _P		0.826 (0.786, 0.860)	100.0	0.832 (0.805, 0.855)	99.9	0.836 (0.822, 0.846)	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.