

Kernel-based estimation of $P(X > Y)$ in ranked set sampling

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December 2016

The material contained herein is supplementary to the article named
in the title and published in SORT-Statistics and Operations
Research Transactions Volume 40 (2).

Table 1: Estimated REs under uniform distribution (RE1, RE2, RE3 and RE4 are based on bandwidth selection using AMISE, UCV, BCV and PI methods, respectively).

(m, n)	θ	RE1	RE2	RE3	RE4
(3,3)	0.1	1.03 (0.53)	1.05 (0.57)	1.03 (0.53)	1.57 (1.59)
	0.3	1.64 (1.90)	1.69 (1.92)	1.64 (1.90)	1.97 (1.35)
	0.5	2.53 (4.39)	2.50 (4.05)	2.53 (4.39)	2.02 (1.36)
	0.7	1.60 (1.88)	1.65 (1.91)	1.60 (1.88)	1.94 (1.34)
	0.9	1.01 (0.54)	1.02 (0.58)	1.01 (0.54)	1.50 (1.62)
(3,7)	0.1	1.03 (0.26)	1.07 (0.42)	1.03 (0.26)	1.76 (1.21)
	0.3	1.58 (1.16)	1.97 (1.31)	1.58 (1.16)	2.83 (1.43)
	0.5	2.92 (3.96)	3.01 (3.08)	2.92 (3.96)	2.53 (1.41)
	0.7	1.65 (1.62)	1.80 (1.62)	1.65 (1.62)	2.10 (1.32)
	0.9	1.00 (0.48)	1.01 (0.52)	1.00 (0.48)	1.44 (1.46)
(5,5)	0.1	1.00 (0.31)	1.04 (0.43)	1.00 (0.31)	1.59 (1.24)
	0.3	1.63 (1.21)	2.10 (1.38)	1.63 (1.21)	2.86 (1.44)
	0.5	3.75 (4.38)	3.84 (2.99)	3.75 (4.38)	3.23 (1.49)
	0.7	1.62 (1.19)	2.08 (1.35)	1.62 (1.19)	2.81 (1.42)
	0.9	1.00 (0.31)	1.04 (0.44)	1.00 (0.31)	1.59 (1.23)
(10,10)	0.1	1.07 (0.15)	1.11 (0.30)	1.07 (0.15)	1.97 (0.88)
	0.3	1.67 (0.53)	2.87 (0.87)	1.67 (0.53)	4.77 (1.30)
	0.5	6.32 (3.55)	6.93 (2.26)	6.32 (3.55)	6.05 (1.51)
	0.7	1.69 (0.53)	2.93 (0.87)	1.69 (0.53)	4.91 (1.30)
	0.9	1.07 (0.15)	1.09 (0.30)	1.07 (0.15)	1.97 (0.89)

Table 2: Estimated REs under uniform distribution with imperfect ranking (RE1, RE2, RE3 and RE4 are based on bandwidth selection using AMISE, UCV, BCV and PI methods, respectively).

(m, n)	θ	RE1	RE2	RE3	RE4
(3,3)	0.1	1.01 (0.58)	1.02 (0.63)	1.01 (0.58)	1.37 (1.59)
	0.3	1.51 (2.00)	1.54 (2.00)	1.51 (2.00)	1.71 (1.31)
	0.5	2.08 (4.05)	2.06 (3.74)	2.08 (4.05)	1.72 (1.31)
	0.7	1.47 (1.98)	1.51 (1.98)	1.47 (1.98)	1.68 (1.31)
	0.9	1.01 (0.57)	1.02 (0.61)	1.01 (0.57)	1.40 (1.55)
(5,5)	0.1	1.01 (0.35)	1.04 (0.50)	1.01 (0.35)	1.47 (1.30)
	0.3	1.58 (1.28)	1.97 (1.42)	1.58 (1.28)	2.50 (1.39)
	0.5	3.17 (4.31)	3.23 (2.92)	3.17 (4.31)	2.76 (1.48)
	0.7	1.56 (1.30)	1.97 (1.44)	1.56 (1.30)	2.52 (1.41)
	0.9	1.01 (0.34)	1.06 (0.49)	1.01 (0.34)	1.50 (1.28)