

1 Results of \mathcal{M}_1

Table 1: 30 Monte Carlo simulations of \mathcal{M}_1 for \mathcal{B}_u with varying n and σ_α

n	σ_α	Guess			LOOCV with k random draws			Distance to y_{1,T^*+1}			
		$\hat{\delta}_{\hat{\alpha}_{\text{adj}}}$	$\hat{\delta}_{\hat{\alpha}_{\text{wadj}}}$	$\hat{\delta}_{\hat{\alpha}_{\text{IVW}}}$	$\tilde{\mathcal{C}}^{(k)}(\hat{\delta}_{\hat{\alpha}_{\text{adj}}})$	$\tilde{\mathcal{C}}^{(k)}(\hat{\delta}_{\hat{\alpha}_{\text{wadj}}})$	$\tilde{\mathcal{C}}^{(k)}(\hat{\delta}_{\hat{\alpha}_{\text{IVW}}})$	Original	$\hat{\alpha}_{\text{adj}}$	$\hat{\alpha}_{\text{wadj}}$	$\hat{\alpha}_{\text{IVW}}$
5	5	1 (0)	1 (0)	1 (0)	0.97 (0.01)	0.97 (0.01)	0.97 (0.01)	50.44 (3.04)	14.42 (2.64)	14.58 (2.69)	14.37 (2.64)
	10	1 (0)	1 (0)	1 (0)	0.93 (0.02)	0.93 (0.02)	0.93 (0.02)	51.17 (3.43)	16.97 (2.88)	16.82 (2.91)	17.04 (2.87)
	25	1 (0)	1 (0)	1 (0)	0.85 (0.02)	0.83 (0.03)	0.85 (0.02)	53.63 (5.49)	27.12 (4.56)	28.8 (4.26)	27.31 (4.54)
	50	0.97 (0.03)	0.97 (0.03)	0.9 (0.06)	0.61 (0.05)	0.63 (0.05)	0.63 (0.05)	63.4 (8.74)	47.94 (8.09)	52.66 (7.56)	48.28 (8.06)
10	100	0.7 (0.09)	0.63 (0.09)	0.63 (0.09)	0.55 (0.05)	0.6 (0.04)	0.55 (0.05)	92.54 (15.54)	91.55 (15.74)	102.28 (14.95)	92.35 (15.7)
	5	1 (0)	1 (0)	1 (0)	0.94 (0.02)	0.93 (0.02)	0.93 (0.02)	51.41 (2.47)	11.95 (1.75)	12.26 (1.88)	12.02 (1.78)
	10	1 (0)	1 (0)	1 (0)	0.93 (0.02)	0.9 (0.02)	0.92 (0.02)	50.22 (3.12)	14.17 (2.41)	14.54 (2.46)	14.17 (2.47)
	25	1 (0)	0.97 (0.03)	0.97 (0.03)	0.79 (0.03)	0.79 (0.03)	0.79 (0.03)	47 (5.94)	28.21 (4.39)	26.37 (4.8)	28.37 (4.46)
15	50	0.87 (0.06)	0.9 (0.06)	0.73 (0.08)	0.65 (0.04)	0.64 (0.04)	0.63 (0.04)	52.83 (9.71)	54.55 (8.17)	51.15 (8.89)	54.71 (8.26)
	100	0.77 (0.08)	0.73 (0.08)	0.57 (0.09)	0.47 (0.04)	0.53 (0.05)	0.47 (0.04)	85.79 (17.29)	108.57 (15.99)	106.48 (16.44)	108.85 (16.09)
	5	1 (0)	1 (0)	1 (0)	0.95 (0.02)	0.95 (0.02)	0.95 (0.02)	47.84 (2.91)	13.2 (1.81)	12.78 (1.63)	13.04 (1.82)
	10	1 (0)	1 (0)	1 (0)	0.95 (0.02)	0.93 (0.02)	0.95 (0.02)	48.16 (3.24)	14.63 (2)	14.14 (1.91)	14.58 (1.98)
25	25	1 (0)	1 (0)	0.97 (0.03)	0.79 (0.03)	0.79 (0.03)	0.79 (0.03)	49.39 (4.94)	21.64 (3.28)	23.4 (3.27)	21.59 (3.29)
	50	0.9 (0.06)	0.9 (0.06)	0.83 (0.07)	0.57 (0.05)	0.62 (0.04)	0.55 (0.04)	56.69 (7.53)	38.83 (5.67)	45.4 (5.59)	39.2 (5.56)
	100	0.67 (0.09)	0.63 (0.09)	0.47 (0.09)	0.47 (0.04)	0.44 (0.04)	0.46 (0.04)	85 (12.02)	77.64 (10.39)	91.43 (10.65)	77.98 (10.23)
	5	1 (0)	1 (0)	1 (0)	0.98 (0.01)	0.97 (0.01)	0.98 (0.01)	47.68 (3.18)	12.86 (1.96)	12.6 (2.09)	12.75 (1.98)
50	10	1 (0)	1 (0)	1 (0)	0.95 (0.02)	0.95 (0.02)	0.95 (0.02)	46.14 (3.34)	14.31 (1.86)	13.74 (2.1)	14.33 (1.85)
	25	1 (0)	1 (0)	0.97 (0.03)	0.79 (0.03)	0.8 (0.03)	0.79 (0.03)	42.26 (4.45)	21.32 (2.55)	22.65 (2.87)	21.46 (2.52)
	50	0.93 (0.05)	0.9 (0.06)	0.87 (0.06)	0.62 (0.04)	0.61 (0.04)	0.63 (0.04)	44.43 (6.07)	38.19 (4.48)	43.57 (4.93)	38.6 (4.44)
	100	0.9 (0.06)	0.8 (0.07)	0.73 (0.08)	0.53 (0.04)	0.54 (0.04)	0.51 (0.04)	71.69 (9.1)	72.64 (9.64)	87.82 (9.85)	73.73 (9.57)

Table 2: 30 Monte Carlo simulations of \mathcal{M}_1 for \mathcal{B}_u with varying σ and σ_α

σ	σ_α	Guess			LOOCV with k random draws			Distance to y_{1,T^*+1}			
		$\hat{\delta}_{\hat{\alpha}_{\text{adj}}}$	$\hat{\delta}_{\hat{\alpha}_{\text{wadj}}}$	$\hat{\delta}_{\hat{\alpha}_{\text{IVW}}}$	$\tilde{\mathcal{C}}^{(k)}(\hat{\delta}_{\hat{\alpha}_{\text{adj}}})$	$\tilde{\mathcal{C}}^{(k)}(\hat{\delta}_{\hat{\alpha}_{\text{wadj}}})$	$\tilde{\mathcal{C}}^{(k)}(\hat{\delta}_{\hat{\alpha}_{\text{IVW}}})$	Original	$\hat{\alpha}_{\text{adj}}$	$\hat{\alpha}_{\text{wadj}}$	$\hat{\alpha}_{\text{IVW}}$
5	5	1 (0)	1 (0)	1 (0)	0.99 (0.01)	0.99 (0.01)	0.99 (0.01)	49.68 (1.63)	7.62 (1.21)	7.77 (1.28)	7.62 (1.24)
	10	1 (0)	1 (0)	1 (0)	0.99 (0.01)	0.99 (0.01)	0.99 (0.01)	48.5 (2.53)	11.95 (1.85)	11.49 (2)	12.03 (1.88)
	25	1 (0)	1 (0)	0.93 (0.05)	0.85 (0.03)	0.85 (0.03)	0.85 (0.03)	44.99 (5.78)	27.75 (4.03)	26.06 (4.42)	27.85 (4.07)
	50	0.9 (0.06)	0.93 (0.05)	0.8 (0.07)	0.65 (0.03)	0.66 (0.03)	0.63 (0.04)	52.5 (9.41)	54.76 (7.92)	53.73 (8.17)	54.92 (7.97)
10	100	0.73 (0.08)	0.73 (0.08)	0.57 (0.09)	0.48 (0.04)	0.51 (0.04)	0.47 (0.04)	86.04 (17.13)	110.35 (15.5)	109.21 (15.79)	110.42 (15.62)
	5	1 (0)	1 (0)	1 (0)	0.94 (0.02)	0.93 (0.02)	0.93 (0.02)	51.41 (2.47)	11.95 (1.75)	12.26 (1.88)	12.02 (1.78)
	10	1 (0)	1 (0)	1 (0)	0.93 (0.02)	0.9 (0.02)	0.92 (0.02)	50.22 (3.12)	14.17 (2.41)	14.54 (2.46)	14.17 (2.47)
	25	1 (0)	0.97 (0.03)	0.97 (0.03)	0.79 (0.03)	0.79 (0.03)	0.79 (0.03)	47 (5.94)	28.21 (4.39)	26.37 (4.8)	28.37 (4.46)
25	50	0.87 (0.06)	0.9 (0.06)	0.73 (0.08)	0.65 (0.04)	0.64 (0.04)	0.63 (0.04)	52.83 (9.71)	54.55 (8.17)	51.15 (8.89)	54.71 (8.26)
	100	0.77 (0.08)	0.73 (0.08)	0.57 (0.09)	0.47 (0.04)	0.53 (0.05)	0.47 (0.04)	85.79 (17.29)	108.57 (15.99)	106.48 (16.44)	108.85 (16.09)
	5	0.97 (0.03)	0.93 (0.05)	0.9 (0.06)	0.77 (0.03)	0.79 (0.03)	0.77 (0.03)	56.81 (5.73)	28.42 (3.9)	28.84 (4.24)	28.31 (4)
	10	0.97 (0.03)	0.93 (0.05)	0.9 (0.06)	0.77 (0.03)	0.79 (0.03)	0.77 (0.03)	55.69 (5.99)	29.55 (4.17)	29.47 (4.56)	29.6 (4.26)
50	25	0.93 (0.05)	0.9 (0.06)	0.87 (0.06)	0.71 (0.04)	0.69 (0.04)	0.69 (0.04)	54.03 (7.4)	35.79 (6.05)	35.34 (6.29)	35.8 (6.21)
	50	0.8 (0.07)	0.73 (0.08)	0.67 (0.09)	0.59 (0.05)	0.59 (0.05)	0.59 (0.05)	58.47 (10.63)	57.13 (9.47)	53.81 (10.1)	57.46 (9.61)
	100	0.7 (0.09)	0.73 (0.08)	0.6 (0.09)	0.48 (0.05)	0.53 (0.04)	0.47 (0.04)	89.65 (17.56)	108.87 (16.85)	100.54 (18.43)	109.32 (17.01)
	5	0.77 (0.08)	0.73 (0.08)	0.7 (0.09)	0.48 (0.04)	0.49 (0.04)	0.48 (0.04)	74.3 (9.4)	56.62 (7.74)	57.8 (8.28)	56.64 (7.83)
100	10	0.77 (0.08)	0.73 (0.08)	0.7 (0.09)	0.47 (0.05)	0.49 (0.04)	0.47 (0.04)	73.97 (9.36)	57.3 (7.84)	57.88 (8.45)	57.29 (7.97)
	25	0.73 (0.08)	0.63 (0.09)	0.67 (0.09)	0.49 (0.04)	0.5 (0.04)	0.5 (0.04)	74.15 (9.79)	61.5 (8.75)	60.05 (9.58)	61.64 (8.95)
	50	0.67 (0.09)	0.6 (0.09)	0.57 (0.09)	0.5 (0.04)	0.55 (0.04)	0.49 (0.04)	77.11 (12.25)	72.31 (12.11)	71.3 (12.48)	72.47 (12.4)
	100	0.67 (0.09)	0.6 (0.09)	0.5 (0.09)	0.47 (0.05)	0.51 (0.04)	0.47 (0.04)	100.81 (18.65)	114.75 (18.98)	107.41 (20.26)	115.39 (19.27)
100	5	0.57 (0.09)	0.5 (0.09)	0.53 (0.09)	0.51 (0.04)	0.49 (0.04)	0.53 (0.05)	120.39 (16.06)	113.53 (15.4)	116.64 (16.14)	113.57 (15.53)
	10	0.57 (0.09)	0.5 (0.09)	0.53 (0.09)	0.52 (0.05)	0.49 (0.04)	0.53 (0.05)	119.9 (16.04)	113.73 (15.47)	115.28 (16.51)	113.78 (15.63)
	25	0.6 (0.09)	0.5 (0.09)	0.53 (0.09)	0.51 (0.04)	0.55 (0.04)	0.53 (0.04)	120.59 (15.93)	115.82 (15.92)	115.95 (17.06)	115.74 (16.23)
	50	0.6 (0.09)	0.47 (0.09)	0.53 (0.09)	0.53 (0.05)	0.58 (0.05)	0.53 (0.04)	122.37 (17.24)	123.37 (17.55)	120.3 (18.99)	123.69 (17.93)
	100	0.63 (0.09)	0.47 (0.09)	0.5 (0.09)	0.47 (0.05)	0.53 (0.05)	0.48 (0.04)	137.56 (21.94)	145.22 (24.23)	143.1 (24.73)	145.67 (24.77)

Table 3: 30 Monte Carlo simulations of \mathcal{M}_1 for \mathcal{B}_f with varying n and σ_α

n	σ_α	Guess			LOOCV with k random draws			Distance to y_1, T_1^*+1			
		$\delta_{\hat{\alpha}_{\text{adj}}}$	$\delta_{\hat{\alpha}_{\text{wadj}}}$	$\delta_{\hat{\alpha}_{\text{IVW}}}$	$\tilde{\mathcal{C}}^{(k)}(\delta_{\hat{\alpha}_{\text{adj}}})$	$\tilde{\mathcal{C}}^{(k)}(\delta_{\hat{\alpha}_{\text{wadj}}})$	$\tilde{\mathcal{C}}^{(k)}(\delta_{\hat{\alpha}_{\text{IVW}}})$	Original	$\hat{\alpha}_{\text{adj}}$	$\hat{\alpha}_{\text{wadj}}$	$\hat{\alpha}_{\text{IVW}}$
5	5	1 (0)	1 (0)	1 (0)	0.93 (0.02)	0.93 (0.02)	0.93 (0.02)	49.36 (2.51)	12.52 (2.39)	12.82 (2.25)	12.27 (2.39)
	10	1 (0)	1 (0)	1 (0)	0.89 (0.02)	0.9 (0.02)	0.89 (0.02)	49.62 (2.89)	15.15 (2.61)	14.75 (2.55)	14.93 (2.59)
	25	1 (0)	1 (0)	1 (0)	0.81 (0.03)	0.79 (0.03)	0.81 (0.03)	50.39 (5.33)	28.01 (3.76)	28 (3.52)	27.66 (3.72)
	50	0.97 (0.03)	0.97 (0.03)	0.97 (0.03)	0.66 (0.03)	0.65 (0.04)	0.67 (0.03)	61.3 (8.41)	51.79 (6.68)	51.84 (6.45)	51.36 (6.62)
	100	0.93 (0.05)	0.9 (0.06)	0.9 (0.06)	0.53 (0.05)	0.45 (0.05)	0.55 (0.05)	102.54 (13.46)	100.42 (13.26)	99.48 (13.38)	99.81 (13.15)
10	5	1 (0)	1 (0)	1 (0)	0.93 (0.02)	0.92 (0.02)	0.93 (0.02)	52.85 (2.66)	11.93 (1.97)	13.19 (2.07)	11.85 (2.01)
	10	1 (0)	1 (0)	1 (0)	0.89 (0.02)	0.9 (0.02)	0.9 (0.02)	53.22 (3)	13.55 (2.1)	14.51 (2.19)	13.43 (2.15)
	25	1 (0)	1 (0)	1 (0)	0.75 (0.04)	0.79 (0.04)	0.76 (0.04)	54.31 (4.77)	23.71 (2.71)	21.37 (3.47)	23.58 (2.72)
	50	1 (0)	0.97 (0.03)	0.77 (0.08)	0.59 (0.04)	0.64 (0.04)	0.59 (0.04)	58.73 (7.88)	41.53 (5.24)	37.18 (6.44)	41.37 (5.15)
	100	1 (0)	0.97 (0.03)	0.73 (0.08)	0.48 (0.05)	0.48 (0.05)	0.48 (0.04)	82.13 (12.74)	77.4 (11.24)	72.81 (12.65)	77.07 (11.02)
15	5	1 (0)	1 (0)	1 (0)	0.94 (0.02)	0.93 (0.02)	0.94 (0.02)	46.76 (2.5)	11.39 (1.4)	13.23 (1.68)	11.38 (1.39)
	10	1 (0)	1 (0)	1 (0)	0.92 (0.02)	0.91 (0.02)	0.92 (0.02)	46.37 (2.59)	11.65 (1.56)	13.88 (1.96)	11.66 (1.55)
	25	1 (0)	1 (0)	1 (0)	0.81 (0.03)	0.81 (0.03)	0.81 (0.03)	45.21 (3.62)	17.31 (2.23)	21.19 (2.76)	17.16 (2.33)
	50	1 (0)	1 (0)	0.87 (0.06)	0.64 (0.05)	0.67 (0.04)	0.65 (0.04)	44.29 (6.1)	30.7 (4.15)	36.42 (4.91)	31.17 (4.18)
	100	0.9 (0.06)	0.87 (0.06)	0.7 (0.09)	0.55 (0.04)	0.52 (0.05)	0.56 (0.04)	57.73 (9.79)	61.28 (8.18)	71.42 (9.17)	62.33 (8.22)
25	5	1 (0)	1 (0)	1 (0)	0.95 (0.02)	0.95 (0.02)	0.95 (0.02)	47.87 (3.13)	12.4 (2.09)	13.37 (1.95)	12.4 (2.09)
	10	1 (0)	1 (0)	1 (0)	0.95 (0.02)	0.93 (0.02)	0.95 (0.02)	46.81 (3.5)	14.31 (2.26)	15.8 (2.17)	14.23 (2.26)
	25	1 (0)	1 (0)	0.93 (0.05)	0.74 (0.03)	0.77 (0.03)	0.74 (0.03)	45.32 (4.84)	23.24 (3.26)	25.45 (3.64)	23.12 (3.23)
	50	1 (0)	0.97 (0.03)	0.77 (0.08)	0.61 (0.03)	0.59 (0.03)	0.6 (0.03)	52.43 (6.48)	43.31 (5.03)	46.98 (6.12)	43.24 (4.93)
	100	1 (0)	0.97 (0.03)	0.67 (0.09)	0.53 (0.04)	0.53 (0.03)	0.53 (0.04)	85.99 (9.26)	83.52 (9.56)	90.95 (11.69)	83.53 (9.39)

Table 4: 30 Monte Carlo simulations of \mathcal{M}_1 for \mathcal{B}_f with varying σ and σ_α

σ	σ_α	Guess			LOOCV with k random draws			Distance to y_1, T_1^*+1			
		$\delta_{\hat{\alpha}_{\text{adj}}}$	$\delta_{\hat{\alpha}_{\text{wadj}}}$	$\delta_{\hat{\alpha}_{\text{IVW}}}$	$\tilde{\mathcal{C}}^{(k)}(\delta_{\hat{\alpha}_{\text{adj}}})$	$\tilde{\mathcal{C}}^{(k)}(\delta_{\hat{\alpha}_{\text{wadj}}})$	$\tilde{\mathcal{C}}^{(k)}(\delta_{\hat{\alpha}_{\text{IVW}}})$	Original	$\hat{\alpha}_{\text{adj}}$	$\hat{\alpha}_{\text{wadj}}$	$\hat{\alpha}_{\text{IVW}}$
5	5	1 (0)	1 (0)	1 (0)	0.99 (0.01)	0.99 (0.01)	0.99 (0.01)	51.6 (1.52)	6.91 (1.05)	7.35 (1.09)	6.85 (1.07)
	10	1 (0)	1 (0)	1 (0)	0.99 (0.01)	0.99 (0.01)	0.99 (0.01)	51.96 (2.07)	10.22 (1.19)	9.5 (1.47)	10.18 (1.2)
	25	1 (0)	1 (0)	1 (0)	0.79 (0.03)	0.82 (0.03)	0.79 (0.03)	53.05 (4.27)	20.92 (2.62)	18.7 (3.21)	20.87 (2.57)
	50	1 (0)	1 (0)	0.87 (0.06)	0.59 (0.04)	0.66 (0.04)	0.58 (0.04)	57.88 (7.51)	38.89 (5.61)	36.51 (6.32)	38.74 (5.51)
	100	1 (0)	1 (0)	0.73 (0.08)	0.45 (0.04)	0.46 (0.05)	0.46 (0.04)	80.3 (12.8)	76.09 (11.54)	72.77 (12.71)	75.51 (11.37)
10	5	1 (0)	1 (0)	1 (0)	0.93 (0.02)	0.92 (0.02)	0.93 (0.02)	52.85 (2.66)	11.93 (1.97)	13.19 (2.07)	11.85 (2.01)
	10	1 (0)	1 (0)	1 (0)	0.89 (0.02)	0.9 (0.02)	0.9 (0.02)	53.22 (3)	13.55 (2.1)	14.51 (2.19)	13.43 (2.15)
	25	1 (0)	1 (0)	1 (0)	0.75 (0.04)	0.79 (0.04)	0.76 (0.04)	54.31 (4.77)	23.71 (2.71)	21.37 (3.47)	23.58 (2.72)
	50	1 (0)	0.97 (0.03)	0.77 (0.08)	0.59 (0.04)	0.64 (0.04)	0.59 (0.04)	58.73 (7.88)	41.53 (5.24)	37.18 (6.44)	41.37 (5.15)
	100	1 (0)	0.97 (0.03)	0.73 (0.08)	0.48 (0.05)	0.48 (0.05)	0.48 (0.04)	82.13 (12.74)	77.4 (11.24)	72.81 (12.65)	77.07 (11.02)
25	5	0.97 (0.03)	0.97 (0.03)	0.93 (0.05)	0.77 (0.03)	0.75 (0.03)	0.76 (0.03)	58.95 (5.73)	28.82 (4.87)	30.78 (5.44)	29.02 (4.91)
	10	0.97 (0.03)	0.97 (0.03)	0.93 (0.05)	0.78 (0.04)	0.76 (0.04)	0.77 (0.04)	59.25 (5.89)	28.98 (4.93)	31.55 (5.31)	29.1 (4.99)
	25	0.97 (0.03)	0.97 (0.03)	0.9 (0.06)	0.67 (0.04)	0.67 (0.04)	0.67 (0.04)	61.16 (6.63)	33.6 (5.22)	35.64 (5.47)	33.34 (5.33)
	50	0.9 (0.06)	0.83 (0.07)	0.77 (0.08)	0.55 (0.04)	0.59 (0.04)	0.54 (0.05)	66.95 (8.6)	49.6 (6.03)	46.13 (7.36)	49.25 (6.08)
	100	0.9 (0.06)	0.87 (0.06)	0.7 (0.09)	0.49 (0.05)	0.46 (0.05)	0.47 (0.05)	89.11 (12.91)	85.23 (10.31)	75.55 (13.03)	84.46 (10.25)
50	5	0.77 (0.08)	0.6 (0.09)	0.67 (0.09)	0.62 (0.04)	0.57 (0.05)	0.63 (0.04)	77.73 (9.69)	58.31 (9.66)	61.13 (11.05)	59.11 (9.66)
	10	0.77 (0.08)	0.67 (0.09)	0.73 (0.08)	0.64 (0.04)	0.58 (0.05)	0.62 (0.04)	78.36 (9.65)	57.79 (9.73)	61.58 (10.86)	58.54 (9.74)
	25	0.8 (0.07)	0.67 (0.09)	0.73 (0.08)	0.63 (0.04)	0.57 (0.04)	0.61 (0.05)	81.3 (9.66)	59.28 (9.82)	64.17 (10.5)	59.24 (9.98)
	50	0.87 (0.06)	0.7 (0.09)	0.67 (0.09)	0.51 (0.05)	0.51 (0.05)	0.53 (0.05)	86.76 (10.76)	67.58 (10.33)	70.73 (10.98)	67.06 (10.54)
	100	0.87 (0.06)	0.7 (0.09)	0.63 (0.09)	0.48 (0.05)	0.53 (0.04)	0.47 (0.05)	102.61 (14.87)	98.97 (12.06)	91.38 (14.79)	98.17 (12.16)
100	5	0.63 (0.09)	0.53 (0.09)	0.5 (0.09)	0.55 (0.04)	0.54 (0.03)	0.53 (0.04)	123.93 (17.91)	117.54 (19.27)	122.82 (22.17)	119.19 (19.23)
	10	0.6 (0.09)	0.5 (0.09)	0.5 (0.09)	0.54 (0.04)	0.54 (0.03)	0.53 (0.04)	124.06 (17.94)	117.01 (19.28)	122.57 (22.05)	118.62 (19.25)
	25	0.63 (0.09)	0.47 (0.09)	0.5 (0.09)	0.51 (0.04)	0.53 (0.04)	0.52 (0.04)	125.25 (18.06)	115.88 (19.47)	123.94 (21.52)	116.93 (19.56)
	50	0.67 (0.09)	0.43 (0.09)	0.53 (0.09)	0.51 (0.05)	0.51 (0.04)	0.52 (0.05)	130.4 (18.23)	119.1 (19.58)	128.78 (20.9)	119.01 (19.88)
	100	0.57 (0.09)	0.53 (0.09)	0.43 (0.09)	0.49 (0.04)	0.49 (0.04)	0.45 (0.04)	143.5 (20.29)	135.98 (20.53)	141.58 (21.93)	134.9 (20.94)

2 Results of \mathcal{M}_2

Table 5: 30 Monte Carlo simulations of \mathcal{M}_2 for \mathcal{B}_u with varying n and σ_α

n	σ_α	Guess			LOOCV with k random draws			Original	Distance to y_{1,T_1^*+1}		
		$\hat{\delta}_{\hat{\alpha}_{\text{adj}}}$	$\hat{\delta}_{\hat{\alpha}_{\text{wadj}}}$	$\hat{\delta}_{\hat{\alpha}_{\text{IVW}}}$	$\tilde{\mathcal{C}}^{(k)}(\hat{\delta}_{\hat{\alpha}_{\text{adj}}})$	$\tilde{\mathcal{C}}^{(k)}(\hat{\delta}_{\hat{\alpha}_{\text{wadj}}})$	$\tilde{\mathcal{C}}^{(k)}(\hat{\delta}_{\hat{\alpha}_{\text{IVW}}})$		$\hat{\alpha}_{\text{adj}}$	$\hat{\alpha}_{\text{wadj}}$	$\hat{\alpha}_{\text{IVW}}$
5	5	1 (0)	1 (0)	1 (0)	0.91 (0.03)	0.91 (0.02)	0.9 (0.03)	53.23 (4.1)	15.88 (2.1)	16.78 (2.37)	15.82 (2.07)
	10	0.97 (0.03)	1 (0)	0.97 (0.03)	0.89 (0.03)	0.9 (0.03)	0.89 (0.03)	53.01 (4.47)	17.83 (2.38)	19.56 (2.56)	17.61 (2.36)
	25	0.93 (0.05)	0.97 (0.03)	0.93 (0.05)	0.74 (0.04)	0.81 (0.04)	0.75 (0.04)	53.38 (5.92)	26.44 (3.8)	29.06 (4)	26.11 (3.75)
	50	0.83 (0.07)	0.83 (0.07)	0.8 (0.07)	0.59 (0.05)	0.64 (0.05)	0.59 (0.05)	61.68 (7.73)	46 (6.31)	47.3 (7.14)	45.25 (6.32)
10	100	0.7 (0.09)	0.87 (0.06)	0.7 (0.09)	0.53 (0.05)	0.54 (0.05)	0.53 (0.06)	85.68 (12.95)	87.25 (11.86)	87.07 (13.63)	85.65 (12.02)
	5	1 (0)	1 (0)	1 (0)	0.91 (0.03)	0.92 (0.02)	0.91 (0.03)	48.18 (4.59)	20.47 (2.71)	19.13 (2.97)	20.53 (2.73)
	10	1 (0)	1 (0)	1 (0)	0.87 (0.03)	0.89 (0.03)	0.87 (0.03)	48.93 (4.71)	21.27 (2.6)	19.24 (3.03)	21.31 (2.61)
	25	0.93 (0.05)	0.97 (0.03)	0.9 (0.06)	0.74 (0.03)	0.77 (0.03)	0.74 (0.03)	51.18 (5.7)	26.68 (2.78)	27.17 (3)	26.53 (2.77)
15	50	0.8 (0.07)	0.8 (0.07)	0.8 (0.07)	0.57 (0.04)	0.61 (0.04)	0.57 (0.04)	57.82 (7.81)	40.51 (4.37)	46.85 (4.02)	40.19 (4.27)
	100	0.73 (0.08)	0.93 (0.05)	0.7 (0.09)	0.51 (0.04)	0.51 (0.04)	0.5 (0.04)	79.3 (12.44)	72.33 (9.12)	88.81 (8.46)	71.83 (8.85)
	5	1 (0)	1 (0)	1 (0)	0.94 (0.02)	0.95 (0.02)	0.94 (0.02)	51.11 (3.05)	14.94 (2.36)	14.09 (2.37)	15.09 (2.35)
	10	1 (0)	1 (0)	1 (0)	0.92 (0.02)	0.91 (0.02)	0.91 (0.02)	52.34 (3.19)	15.64 (2.73)	15.29 (2.74)	15.89 (2.68)
25	25	0.93 (0.05)	0.97 (0.03)	0.93 (0.05)	0.73 (0.04)	0.76 (0.04)	0.73 (0.04)	56.03 (5.2)	25.49 (3.85)	27.38 (3.87)	25.27 (3.84)
	50	0.8 (0.07)	0.83 (0.07)	0.8 (0.07)	0.56 (0.04)	0.6 (0.04)	0.57 (0.04)	71.37 (7.76)	47.25 (6.42)	52.06 (6.57)	46.41 (6.43)
	100	0.63 (0.09)	0.67 (0.09)	0.63 (0.09)	0.52 (0.04)	0.42 (0.04)	0.53 (0.04)	111.91 (13.83)	92.95 (12.34)	103.13 (12.74)	91.07 (12.37)
	5	1 (0)	1 (0)	1 (0)	0.93 (0.02)	0.94 (0.02)	0.93 (0.02)	47.79 (2.93)	14.83 (1.72)	14.83 (2.04)	14.76 (1.72)
50	10	1 (0)	1 (0)	1 (0)	0.89 (0.03)	0.91 (0.02)	0.89 (0.03)	47.93 (3.25)	16.55 (1.89)	17.55 (2.12)	16.53 (1.88)
	25	1 (0)	1 (0)	1 (0)	0.83 (0.03)	0.82 (0.03)	0.83 (0.03)	49.78 (5.01)	26.42 (3.38)	29.11 (3.4)	26.45 (3.35)
	50	0.97 (0.03)	1 (0)	0.93 (0.05)	0.64 (0.05)	0.63 (0.05)	0.64 (0.05)	62.64 (7.4)	48.84 (6.4)	52.67 (6.28)	48.8 (6.35)
	100	0.83 (0.07)	0.8 (0.07)	0.83 (0.07)	0.57 (0.05)	0.59 (0.05)	0.59 (0.05)	103.37 (12.23)	97.81 (12.52)	102.4 (12.49)	97.63 (12.45)

Table 6: 30 Monte Carlo simulations of \mathcal{M}_2 for \mathcal{B}_u with varying σ and σ_α

σ	σ_α	Guess			LOOCV with k random draws			Original	Distance to y_{1,T_1^*+1}		
		$\hat{\delta}_{\hat{\alpha}_{\text{adj}}}$	$\hat{\delta}_{\hat{\alpha}_{\text{wadj}}}$	$\hat{\delta}_{\hat{\alpha}_{\text{IVW}}}$	$\tilde{\mathcal{C}}^{(k)}(\hat{\delta}_{\hat{\alpha}_{\text{adj}}})$	$\tilde{\mathcal{C}}^{(k)}(\hat{\delta}_{\hat{\alpha}_{\text{wadj}}})$	$\tilde{\mathcal{C}}^{(k)}(\hat{\delta}_{\hat{\alpha}_{\text{IVW}}})$		$\hat{\alpha}_{\text{adj}}$	$\hat{\alpha}_{\text{wadj}}$	$\hat{\alpha}_{\text{IVW}}$
5	5	1 (0)	1 (0)	1 (0)	0.94 (0.02)	0.97 (0.01)	0.95 (0.02)	48.84 (3.4)	15.72 (1.93)	15.32 (1.94)	15.72 (1.93)
	10	1 (0)	1 (0)	1 (0)	0.92 (0.03)	0.94 (0.02)	0.92 (0.03)	49.54 (3.73)	17.07 (2.01)	16.08 (2.16)	17.12 (1.99)
	25	0.87 (0.06)	1 (0)	0.87 (0.06)	0.77 (0.02)	0.81 (0.03)	0.77 (0.03)	51.78 (5.22)	24.78 (2.57)	26.12 (2.49)	24.62 (2.54)
	50	0.8 (0.07)	0.83 (0.07)	0.8 (0.07)	0.59 (0.05)	0.61 (0.04)	0.59 (0.05)	58.62 (7.74)	40.09 (4.7)	47.09 (4.09)	39.85 (4.58)
10	100	0.7 (0.09)	0.93 (0.05)	0.73 (0.08)	0.5 (0.04)	0.49 (0.04)	0.51 (0.04)	82.66 (12.19)	72.83 (9.75)	89.03 (9.15)	72.31 (9.5)
	5	1 (0)	1 (0)	1 (0)	0.91 (0.03)	0.92 (0.02)	0.91 (0.03)	48.18 (4.59)	20.47 (2.71)	19.13 (2.97)	20.53 (2.73)
	10	1 (0)	1 (0)	1 (0)	0.87 (0.03)	0.89 (0.03)	0.87 (0.03)	48.93 (4.71)	21.27 (2.6)	19.24 (3.03)	21.31 (2.61)
	25	0.93 (0.05)	0.97 (0.03)	0.9 (0.06)	0.74 (0.03)	0.77 (0.03)	0.74 (0.03)	51.18 (5.7)	26.68 (2.78)	27.17 (3)	26.53 (2.77)
25	50	0.8 (0.07)	0.8 (0.07)	0.8 (0.07)	0.57 (0.04)	0.61 (0.04)	0.57 (0.04)	57.82 (7.81)	40.51 (4.37)	46.85 (4.02)	40.19 (4.27)
	100	0.73 (0.08)	0.93 (0.05)	0.7 (0.09)	0.51 (0.04)	0.51 (0.04)	0.5 (0.04)	79.3 (12.44)	72.33 (9.12)	88.81 (8.46)	71.83 (8.85)
	5	0.97 (0.03)	1 (0)	0.97 (0.03)	0.7 (0.04)	0.76 (0.03)	0.7 (0.04)	50.09 (8.27)	38.1 (5.75)	37.98 (5.5)	38.44 (5.76)
	10	0.97 (0.03)	1 (0)	0.97 (0.03)	0.69 (0.04)	0.74 (0.03)	0.69 (0.04)	50.82 (8.15)	37.63 (5.61)	36.33 (5.64)	37.99 (5.61)
50	25	0.9 (0.06)	0.9 (0.06)	0.9 (0.06)	0.62 (0.04)	0.64 (0.04)	0.61 (0.04)	53.01 (8.22)	38.78 (5.29)	36.82 (5.76)	38.88 (5.31)
	50	0.8 (0.07)	0.8 (0.07)	0.8 (0.07)	0.53 (0.04)	0.53 (0.04)	0.53 (0.04)	58.9 (9.12)	46.77 (5.54)	50.61 (5.71)	46.6 (5.51)
	100	0.7 (0.09)	0.9 (0.06)	0.67 (0.09)	0.51 (0.03)	0.56 (0.04)	0.5 (0.03)	79.64 (12.21)	72.76 (8.79)	89.48 (7.98)	72.17 (8.59)
	5	0.77 (0.08)	0.8 (0.07)	0.77 (0.08)	0.6 (0.05)	0.63 (0.04)	0.59 (0.04)	71.22 (13)	70.31 (10.4)	72.3 (9.26)	70.79 (10.45)
100	10	0.77 (0.08)	0.77 (0.08)	0.77 (0.08)	0.6 (0.05)	0.63 (0.05)	0.6 (0.05)	70.85 (12.91)	69.43 (10.22)	70.65 (9.29)	69.94 (10.26)
	25	0.7 (0.09)	0.73 (0.08)	0.7 (0.09)	0.54 (0.05)	0.56 (0.05)	0.55 (0.05)	70.32 (12.81)	67.61 (9.86)	67 (9.58)	68.06 (9.89)
	50	0.67 (0.09)	0.7 (0.09)	0.67 (0.09)	0.51 (0.05)	0.51 (0.04)	0.51 (0.05)	74.01 (12.66)	68.69 (9.63)	67.9 (10.21)	68.91 (9.64)
	100	0.5 (0.09)	0.6 (0.09)	0.47 (0.09)	0.47 (0.05)	0.49 (0.04)	0.45 (0.05)	92.71 (13.06)	83.66 (10.79)	94.53 (11.2)	83.56 (10.63)
200	5	0.47 (0.09)	0.47 (0.09)	0.47 (0.09)	0.51 (0.06)	0.57 (0.05)	0.49 (0.06)	130.47 (22.59)	135.16 (19.73)	141.42 (16.98)	136.3 (19.72)
	10	0.47 (0.09)	0.47 (0.09)	0.47 (0.09)	0.51 (0.05)	0.53 (0.05)	0.51 (0.06)	129.49 (22.49)	134.09 (19.52)	139.69 (16.96)	135.26 (19.51)
	25	0.47 (0.09)	0.43 (0.09)	0.5 (0.09)	0.53 (0.06)	0.57 (0.05)	0.51 (0.06)	127.17 (22.22)	131.43 (18.97)	134.47 (17.22)	132.42 (18.99)
	50	0.5 (0.09)	0.43 (0.09)	0.5 (0.09)	0.48 (0.06)	0.56 (0.04)	0.48 (0.05)	125.72 (21.8)	129.27 (18.16)	129.59 (17.59)	130.27 (18.15)
	100	0.47 (0.09)	0.47 (0.09)	0.43 (0.09)	0.43 (0.06)	0.57 (0.04)	0.47 (0.06)	128.38 (21.86)	130.05 (18.05)	131.83 (19.08)	130.33 (18.06)

Table 7: 30 Monte Carlo simulations of \mathcal{M}_2 for \mathcal{B}_f with varying n and σ_α

n	σ_α	Guess			LOOCV with k random draws			Distance to y_{1,T_1^*+1}			
		$\delta_{\hat{\alpha}_{\text{adj}}}$	$\delta_{\hat{\alpha}_{\text{wadj}}}$	$\delta_{\hat{\alpha}_{\text{IVW}}}$	$\tilde{\mathcal{C}}^{(k)}(\delta_{\hat{\alpha}_{\text{adj}}})$	$\tilde{\mathcal{C}}^{(k)}(\delta_{\hat{\alpha}_{\text{wadj}}})$	$\tilde{\mathcal{C}}^{(k)}(\delta_{\hat{\alpha}_{\text{IVW}}})$	Original	$\hat{\alpha}_{\text{adj}}$	$\hat{\alpha}_{\text{wadj}}$	$\hat{\alpha}_{\text{IVW}}$
5	5	1 (0)	1 (0)	1 (0)	0.89 (0.03)	0.92 (0.02)	0.89 (0.03)	48.52 (3.93)	15.74 (2.34)	15.76 (2.34)	15.16 (2.24)
	10	1 (0)	1 (0)	1 (0)	0.89 (0.02)	0.91 (0.02)	0.89 (0.02)	47.7 (4.35)	18.26 (2.37)	18.97 (2.42)	17.68 (2.28)
	25	0.97 (0.03)	1 (0)	0.93 (0.05)	0.79 (0.03)	0.81 (0.03)	0.77 (0.03)	46.95 (6.11)	27.35 (3.81)	30.88 (3.84)	26.58 (3.83)
	50	0.8 (0.07)	0.93 (0.05)	0.8 (0.07)	0.62 (0.03)	0.65 (0.03)	0.63 (0.03)	56.85 (8.64)	46.96 (7.02)	52.92 (7.45)	45.95 (7.17)
10	100	0.73 (0.08)	1 (0)	0.8 (0.07)	0.53 (0.04)	0.53 (0.04)	0.55 (0.04)	99.22 (12.84)	93.4 (12.97)	103.82 (14.1)	91.95 (13.34)
	5	1 (0)	1 (0)	1 (0)	0.86 (0.03)	0.88 (0.02)	0.86 (0.03)	50.59 (5.24)	29.19 (5.2)	31.4 (5.28)	29.29 (5.22)
	10	1 (0)	1 (0)	1 (0)	0.82 (0.03)	0.84 (0.03)	0.82 (0.03)	51.17 (5.49)	31.55 (5.33)	33.91 (5.56)	31.7 (5.35)
	25	0.93 (0.05)	1 (0)	0.93 (0.05)	0.72 (0.04)	0.75 (0.04)	0.71 (0.04)	53.53 (6.58)	40.05 (6.03)	43.5 (6.66)	40.43 (6)
15	50	0.87 (0.06)	0.97 (0.03)	0.87 (0.06)	0.55 (0.04)	0.58 (0.05)	0.55 (0.05)	62.45 (8.25)	55.56 (8.11)	62.15 (9.19)	56.12 (8.04)
	100	0.77 (0.08)	0.97 (0.03)	0.73 (0.08)	0.49 (0.05)	0.44 (0.05)	0.46 (0.05)	85.72 (12.73)	89.5 (13.37)	103.25 (15.07)	89.92 (13.29)
	5	1 (0)	1 (0)	1 (0)	0.95 (0.02)	0.92 (0.03)	0.95 (0.02)	52.1 (2.96)	14.04 (1.78)	13.36 (2.07)	14.11 (1.76)
	10	1 (0)	1 (0)	1 (0)	0.92 (0.02)	0.9 (0.03)	0.93 (0.02)	52.25 (3.3)	15.12 (1.93)	14.24 (2.29)	15.18 (1.9)
20	25	0.93 (0.05)	1 (0)	0.9 (0.06)	0.8 (0.03)	0.8 (0.03)	0.8 (0.03)	52.71 (5.28)	22.98 (2.9)	22.6 (3.42)	22.95 (2.88)
	50	0.7 (0.09)	0.9 (0.06)	0.7 (0.09)	0.65 (0.03)	0.65 (0.03)	0.65 (0.04)	58.65 (8.48)	39.51 (5.65)	40.8 (6.3)	39.35 (5.63)
	100	0.6 (0.09)	0.87 (0.06)	0.6 (0.09)	0.47 (0.05)	0.45 (0.04)	0.45 (0.05)	88.76 (13.66)	75.93 (11.52)	81.89 (12.19)	75.94 (11.41)
	5	1 (0)	1 (0)	1 (0)	0.94 (0.02)	0.95 (0.02)	0.94 (0.02)	50.55 (2.9)	12.13 (1.77)	14.22 (1.96)	12.09 (1.77)
25	10	1 (0)	1 (0)	1 (0)	0.93 (0.02)	0.95 (0.02)	0.93 (0.02)	49.13 (3.31)	14.78 (1.85)	18.21 (2)	14.75 (1.85)
	25	1 (0)	1 (0)	1 (0)	0.83 (0.02)	0.85 (0.02)	0.83 (0.03)	47.38 (5.13)	26.85 (3.33)	32.95 (3.59)	26.81 (3.32)
	50	0.97 (0.03)	1 (0)	0.97 (0.03)	0.61 (0.04)	0.71 (0.04)	0.62 (0.04)	56.73 (7.93)	50.96 (6.63)	60.62 (7.21)	50.88 (6.59)
	100	0.8 (0.07)	0.93 (0.05)	0.8 (0.07)	0.49 (0.05)	0.51 (0.04)	0.49 (0.05)	93.79 (14.67)	102.05 (13.37)	116.45 (15.19)	101.55 (13.38)

Table 8: 30 Monte Carlo simulations of \mathcal{M}_2 for \mathcal{B}_f with varying σ and σ_α

σ	σ_α	Guess			LOOCV with k random draws			Distance to y_{1,T_1^*+1}			
		$\delta_{\hat{\alpha}_{\text{adj}}}$	$\delta_{\hat{\alpha}_{\text{wadj}}}$	$\delta_{\hat{\alpha}_{\text{IVW}}}$	$\tilde{\mathcal{C}}^{(k)}(\delta_{\hat{\alpha}_{\text{adj}}})$	$\tilde{\mathcal{C}}^{(k)}(\delta_{\hat{\alpha}_{\text{wadj}}})$	$\tilde{\mathcal{C}}^{(k)}(\delta_{\hat{\alpha}_{\text{IVW}}})$	Original	$\hat{\alpha}_{\text{adj}}$	$\hat{\alpha}_{\text{wadj}}$	$\hat{\alpha}_{\text{IVW}}$
5	5	1 (0)	1 (0)	1 (0)	0.94 (0.02)	0.95 (0.02)	0.94 (0.02)	50.04 (3.65)	21.75 (4.34)	22.68 (4.41)	21.83 (4.34)
	10	1 (0)	1 (0)	1 (0)	0.93 (0.02)	0.92 (0.02)	0.93 (0.02)	49.93 (4.11)	24.3 (4.44)	25.72 (4.58)	24.4 (4.45)
	25	0.97 (0.03)	1 (0)	0.97 (0.03)	0.73 (0.04)	0.8 (0.03)	0.73 (0.04)	51.29 (5.39)	32.8 (5.25)	35.39 (5.78)	33.11 (5.21)
	100	0.77 (0.08)	0.97 (0.03)	0.7 (0.09)	0.49 (0.04)	0.44 (0.05)	0.47 (0.04)	82.55 (11.61)	84.26 (12.7)	98.66 (13.96)	84.62 (12.59)
10	5	1 (0)	1 (0)	1 (0)	0.86 (0.03)	0.88 (0.02)	0.86 (0.03)	50.59 (5.24)	29.19 (5.2)	31.4 (5.28)	29.29 (5.22)
	10	1 (0)	1 (0)	1 (0)	0.82 (0.03)	0.84 (0.03)	0.82 (0.03)	51.17 (5.49)	31.55 (5.33)	33.91 (5.56)	31.7 (5.35)
	25	0.93 (0.05)	1 (0)	0.93 (0.05)	0.72 (0.04)	0.75 (0.04)	0.71 (0.04)	53.53 (6.58)	40.05 (6.03)	43.5 (6.66)	40.43 (6)
	50	0.87 (0.06)	0.97 (0.03)	0.87 (0.06)	0.55 (0.04)	0.58 (0.05)	0.55 (0.05)	62.45 (8.25)	55.56 (8.11)	62.15 (9.19)	56.12 (8.04)
15	100	0.77 (0.08)	0.97 (0.03)	0.73 (0.08)	0.49 (0.05)	0.44 (0.05)	0.46 (0.05)	85.72 (12.73)	89.5 (13.37)	103.25 (15.07)	89.92 (13.29)
	5	0.97 (0.03)	1 (0)	0.97 (0.03)	0.7 (0.03)	0.73 (0.03)	0.71 (0.04)	57.87 (8.76)	50.31 (7.58)	57.25 (7.75)	50.53 (7.64)
	10	0.97 (0.03)	1 (0)	0.97 (0.03)	0.68 (0.04)	0.69 (0.04)	0.69 (0.04)	58.41 (9.11)	51.62 (7.91)	58.61 (8.28)	51.85 (7.98)
	25	0.93 (0.05)	0.97 (0.03)	0.9 (0.06)	0.63 (0.04)	0.68 (0.04)	0.63 (0.04)	62.02 (10.02)	59.08 (8.53)	65.55 (9.64)	59.68 (8.53)
20	50	0.87 (0.06)	0.9 (0.06)	0.87 (0.06)	0.54 (0.04)	0.59 (0.04)	0.52 (0.04)	71.01 (11.73)	73.52 (10.18)	81.81 (11.98)	74.51 (10.09)
	100	0.73 (0.08)	0.87 (0.06)	0.73 (0.08)	0.47 (0.05)	0.45 (0.04)	0.5 (0.05)	95.93 (15.59)	104.49 (15.12)	119.38 (17.62)	105.72 (14.97)
25	5	0.8 (0.07)	0.77 (0.08)	0.8 (0.07)	0.52 (0.04)	0.49 (0.05)	0.52 (0.04)	85.95 (14.57)	90.02 (13.45)	103.03 (13.91)	90.08 (13.64)
	10	0.8 (0.07)	0.73 (0.08)	0.8 (0.07)	0.55 (0.05)	0.5 (0.04)	0.53 (0.05)	86.44 (14.95)	90.89 (13.79)	104.62 (14.28)	91.03 (13.98)
	25	0.77 (0.08)	0.77 (0.08)	0.77 (0.08)	0.53 (0.04)	0.46 (0.04)	0.53 (0.04)	90.26 (15.82)	95.36 (14.69)	109.53 (15.69)	95.79 (14.83)
	50	0.77 (0.08)	0.8 (0.07)	0.77 (0.08)	0.48 (0.05)	0.45 (0.05)	0.45 (0.05)	99.52 (17.26)	106.52 (16.17)	120.99 (18.13)	107.55 (16.19)
50	100	0.57 (0.09)	0.77 (0.08)	0.63 (0.09)	0.41 (0.04)	0.45 (0.03)	0.41 (0.04)	123.11 (20.61)	135.24 (19.74)	151.62 (23.42)	137.21 (19.55)
	5	0.63 (0.09)	0.57 (0.09)	0.63 (0.09)	0.48 (0.05)	0.48 (0.03)	0.47 (0.05)	156.82 (26.36)	170.06 (25.92)	196.4 (26.55)	170.13 (26.27)
	10	0.63 (0.09)	0.57 (0.09)	0.67 (0.09)	0.46 (0.05)	0.47 (0.03)	0.47 (0.05)	157.3 (26.76)	170.93 (26.21)	197.96 (26.87)	171.07 (26.56)
	25	0.67 (0.09)	0.63 (0.09)	0.67 (0.09)	0.44 (0.04)	0.5 (0.03)	0.45 (0.04)	160.32 (27.73)	173.66 (27.22)	202.61 (28.01)	174.28 (27.48)
100	50	0.67 (0.09)	0.67 (0.09)	0.67 (0.09)	0.39 (0.04)	0.43 (0.03)	0.38 (0.04)	166.98 (29.35)	182.83 (28.37)	210.38 (30.48)	183.67 (28.61)
	100	0.6 (0.09)	0.67 (0.09)	0.53 (0.09)	0.4 (0.04)	0.45 (0.04)	0.41 (0.05)	188.29 (32.07)	203.7 (31.63)	233.44 (35.31)	205.4 (31.72)

3 Boundary Case $2p < n$

Table 9: 30 Monte Carlo simulations of \mathcal{M}_2 for \mathcal{B}_u with varying n and σ_α ($p = 2$, boundary case)

n	σ_α	Guess			LOOCV with k random draws			Distance to y_{1,T_1^*+1}			
		$\delta_{\hat{\alpha}_{\text{adj}}}$	$\delta_{\hat{\alpha}_{\text{wadj}}}$	$\delta_{\hat{\alpha}_{\text{IVW}}}$	$\bar{\mathcal{C}}^{(k)}(\delta_{\hat{\alpha}_{\text{adj}}})$	$\bar{\mathcal{C}}^{(k)}(\delta_{\hat{\alpha}_{\text{wadj}}})$	$\bar{\mathcal{C}}^{(k)}(\delta_{\hat{\alpha}_{\text{IVW}}})$	Original	$\hat{\alpha}_{\text{adj}}$	$\hat{\alpha}_{\text{wadj}}$	$\hat{\alpha}_{\text{IVW}}$
5	1	1 (0)	1 (0)	1 (0)	0.99 (0.01)	0.99 (0.01)	0.99 (0.01)	51.71 (1.69)	8.84 (1.23)	9.55 (1.31)	8.81 (1.26)
	5	1 (0)	1 (0)	1 (0)	0.99 (0.01)	0.98 (0.01)	0.99 (0.01)	52.63 (1.87)	10.14 (1.4)	10.33 (1.39)	10.17 (1.42)
	10	1 (0)	1 (0)	1 (0)	0.97 (0.01)	0.97 (0.01)	0.96 (0.02)	53.78 (2.42)	12.44 (1.84)	13.16 (1.83)	12.44 (1.86)
	25	0.9 (0.06)	1 (0)	0.9 (0.06)	0.75 (0.04)	0.79 (0.04)	0.75 (0.04)	57.62 (4.64)	22.34 (3.43)	25.19 (4.13)	22.33 (3.44)
	50	0.7 (0.09)	0.7 (0.09)	0.7 (0.09)	0.59 (0.05)	0.57 (0.04)	0.57 (0.05)	68.41 (7.84)	42.53 (5.97)	49.34 (8.12)	42.44 (6.01)
10	1	1 (0)	1 (0)	1 (0)	0.99 (0.01)	0.98 (0.01)	0.99 (0.01)	52.19 (2.18)	11.1 (1.32)	12.18 (1.81)	11.19 (1.32)
	5	1 (0)	1 (0)	1 (0)	0.97 (0.02)	0.96 (0.01)	0.97 (0.02)	52.33 (2.5)	12.51 (1.58)	14.19 (1.94)	12.61 (1.58)
	10	0.97 (0.03)	0.97 (0.03)	0.93 (0.05)	0.93 (0.02)	0.92 (0.02)	0.93 (0.02)	52.5 (3.09)	14.69 (2.12)	17.46 (2.25)	14.76 (2.13)
	25	0.9 (0.06)	0.9 (0.06)	0.9 (0.06)	0.74 (0.03)	0.76 (0.03)	0.74 (0.03)	54.62 (4.81)	24.86 (3.7)	28.35 (3.96)	24.94 (3.73)
	50	0.7 (0.09)	0.73 (0.08)	0.73 (0.08)	0.59 (0.04)	0.55 (0.04)	0.57 (0.04)	62.89 (7.56)	44.32 (6.5)	49.12 (7.13)	44.44 (6.54)
15	1	1 (0)	1 (0)	1 (0)	0.99 (0.01)	1 (0)	0.99 (0.01)	53.83 (1.89)	9.12 (0.92)	9.95 (1.33)	9.06 (0.93)
	5	1 (0)	1 (0)	1 (0)	0.99 (0.01)	0.99 (0.01)	0.99 (0.01)	55.05 (2.25)	10.47 (1.21)	11.57 (1.54)	10.39 (1.22)
	10	1 (0)	1 (0)	1 (0)	0.95 (0.02)	0.98 (0.01)	0.95 (0.02)	56.57 (2.83)	13.25 (1.61)	14.78 (1.95)	13.19 (1.6)
	25	0.93 (0.05)	0.93 (0.05)	0.93 (0.05)	0.87 (0.03)	0.89 (0.03)	0.88 (0.03)	61.14 (4.94)	24.01 (2.97)	28.39 (3.26)	23.98 (2.91)
	50	0.83 (0.07)	0.83 (0.07)	0.83 (0.07)	0.65 (0.04)	0.67 (0.03)	0.66 (0.04)	71.22 (8.07)	44.06 (5.29)	52.49 (5.93)	43.98 (5.2)
25	1	1 (0)	1 (0)	1 (0)	0.99 (0.01)	0.98 (0.01)	0.99 (0.01)	50.84 (2.39)	10.44 (1.51)	11.58 (1.47)	10.43 (1.51)
	5	1 (0)	1 (0)	1 (0)	0.98 (0.01)	0.98 (0.01)	0.98 (0.01)	50.4 (2.22)	9.97 (1.39)	11.77 (1.34)	9.93 (1.39)
	10	1 (0)	1 (0)	1 (0)	0.96 (0.01)	0.97 (0.01)	0.95 (0.02)	49.84 (2.23)	10.99 (1.21)	12.97 (1.48)	10.98 (1.21)
	25	1 (0)	1 (0)	1 (0)	0.81 (0.03)	0.81 (0.03)	0.81 (0.03)	48.16 (3.49)	16.36 (2.18)	20.67 (2.98)	16.52 (2.15)
	50	0.93 (0.05)	0.93 (0.05)	0.93 (0.05)	0.69 (0.03)	0.69 (0.04)	0.69 (0.03)	48.56 (6.09)	33.14 (3.88)	41.94 (5.18)	33.39 (3.88)