

Supplementary Simulation Tables

Table 1: Sample size (empirical type I error, empirical power) for the comparison of TAR with $\theta = 1$ and $\bar{r} = 0.4$

		β_2	$\rho = 0.1$	$\rho = 0.3$	$\rho = 0.5$
CS	Complete	0.2	165(0.056,0.806)	275(0.053,0.799)	385(0.053,0.800)
		0.25	103(0.060,0.802)	172(0.053,0.813)	240(0.053,0.795)
		0.3	70(0.056,0.807)	116(0.049,0.797)	162(0.055,0.796)
	IM	0.2	181(0.049,0.797)	291(0.051,0.800)	400(0.046,0.792)
		0.25	113(0.057,0.814)	181(0.054,0.788)	249(0.060,0.795)
		0.3	76(0.058,0.795)	123(0.064,0.803)	169(0.063,0.814)
	MM	0.2	185(0.047,0.794)	302(0.054,0.797)	419(0.053,0.793)
		0.25	115(0.048,0.800)	188(0.057,0.794)	261(0.050,0.789)
		0.3	78(0.058,0.818)	127(0.060,0.802)	177(0.054,0.816)
AR(1)	Complete	0.2	130(0.059,0.810)	182(0.059,0.804)	258(0.051,0.804)
		0.25	81(0.060,0.807)	114(0.056,0.808)	161(0.055,0.805)
		0.3	55(0.052,0.814)	77(0.052,0.822)	109(0.058,0.809)
	IM	0.2	146(0.058,0.800)	198(0.058,0.811)	274(0.048,0.806)
		0.25	91(0.054,0.821)	124(0.050,0.821)	171(0.057,0.808)
		0.3	62(0.061,0.818)	84(0.063,0.807)	116(0.061,0.800)
	MM	0.2	148(0.057,0.806)	205(0.051,0.800)	287(0.049,0.807)
		0.25	92(0.058,0.816)	128(0.053,0.810)	179(0.054,0.808)
		0.5	63(0.055,0.812)	87(0.064,0.811)	121(0.058,0.806)

Table 2: Sample size (empirical type I error, empirical power) for the comparison of TAR with $\theta = 2$ and $\bar{r} = 0.4$

		β_2	$\rho = 0.1$	$\rho = 0.3$	$\rho = 0.5$
CS	Complete	0.2	330(0.053,0.802)	550(0.057,0.785)	770(0.068,0.789)
		0.25	206(0.062,0.818)	343(0.052,0.793)	480(0.067,0.797)
		0.3	139(0.058,0.805)	232(0.056,0.804)	324(0.057,0.791)
	IM	0.2	361(0.048,0.795)	581(0.047,0.792)	800(0.063,0.779)
		0.25	225(0.053,0.811)	362(0.053,0.793)	498(0.058,0.779)
		0.3	152(0.051,0.818)	245(0.056,0.786)	337(0.051,0.782)
	MM	0.2	369(0.047,0.795)	603(0.059,0.788)	838(0.053,0.788)
		0.25	230(0.052,0.810)	376(0.052,0.788)	522(0.055,0.798)
		0.3	156(0.055,0.811)	254(0.054,0.791)	353(0.060,0.793)
AR(1)	Complete	0.2	260(0.051,0.796)	364(0.057,0.827)	516(0.052,0.806)
		0.25	162(0.054,0.803)	227(0.057,0.813)	321(0.050,0.804)
		0.3	110(0.054,0.812)	154(0.056,0.814)	217(0.055,0.809)
	IM	0.2	292(0.048,0.809)	396(0.050,0.808)	548(0.056,0.798)
		0.25	182(0.053,0.805)	247(0.057,0.803)	341(0.050,0.796)
		0.3	123(0.057,0.803)	167(0.056,0.814)	231(0.056,0.803)
	MM	0.2	296(0.056,0.806)	410(0.056,0.802)	574(0.049,0.799)
		0.25	184(0.053,0.799)	255(0.057,0.821)	358(0.051,0.816)
		0.5	125(0.054,0.816)	173(0.055,0.815)	242(0.051,0.818)

Table 3: Sample size (empirical type I error, empirical power) for the comparison of TAR with $\theta = 3$ and $\bar{r} = 0.4$

		β_2	$\rho = 0.1$	$\rho = 0.3$	$\rho = 0.5$
CS	Complete	0.2	495(0.051,0.815)	825(0.057,0.798)	1154(0.063,0.779)
		0.25	308(0.046,0.808)	514(0.059,0.786)	719(0.057,0.779)
		0.3	209(0.060,0.814)	348(0.059,0.803)	486(0.062,0.787)
	IM	0.2	542(0.053,0.805)	871(0.058,0.783)	1200(0.063,0.801)
		0.25	338(0.048,0.804)	543(0.063,0.792)	747(0.058,0.787)
		0.3	228(0.054,0.807)	367(0.055,0.788)	506(0.056,0.794)
	MM	0.2	553(0.050,0.813)	905(0.061,0.790)	1256(0.068,0.774)
		0.25	345(0.062,0.804)	564(0.054,0.798)	783(0.054,0.795)
		0.3	233(0.060,0.815)	381(0.062,0.790)	529(0.058,0.796)
AR(1)	Complete	0.2	390(0.058,0.796)	546(0.052,0.806)	773(0.056,0.801)
		0.25	243(0.058,0.814)	340(0.054,0.814)	482(0.059,0.817)
		0.3	164(0.059,0.811)	230(0.058,0.804)	326(0.050,0.812)
	IM	0.2	437(0.056,0.812)	593(0.052,0.807)	821(0.049,0.800)
		0.25	273(0.057,0.814)	370(0.058,0.812)	512(0.054,0.803)
		0.3	184(0.048,0.809)	250(0.056,0.799)	346(0.053,0.808)
	MM	0.2	443(0.057,0.810)	614(0.041,0.803)	861(0.063,0.802)
		0.25	276(0.056,0.808)	383(0.053,0.819)	536(0.055,0.806)
		0.5	187(0.050,0.811)	259(0.047,0.806)	363(0.058,0.806)

Table 4: Sample size (empirical type I error, empirical power) for the comparison of TAR with $\theta = 1$ and $\bar{r} = 0.6$

		β_2	$\rho = 0.1$	$\rho = 0.3$	$\rho = 0.5$
CS	Complete	0.2	172(0.052,0.820)	286(0.054,0.811)	401(0.056,0.791)
		0.25	108(0.052,0.825)	180(0.053,0.801)	252(0.051,0.818)
		0.3	74(0.062,0.832)	123(0.055,0.811)	172(0.049,0.820)
	IM	0.2	188(0.058,0.808)	302(0.061,0.809)	417(0.056,0.799)
		0.25	119(0.055,0.818)	190(0.058,0.814)	262(0.052,0.801)
		0.3	81(0.068,0.816)	130(0.058,0.805)	179(0.058,0.819)
	MM	0.2	192(0.056,0.817)	314(0.049,0.806)	436(0.044,0.807)
		0.25	121(0.053,0.822)	198(0.049,0.800)	275(0.053,0.808)
		0.3	83(0.054,0.816)	135(0.059,0.818)	188(0.053,0.818)
AR(1)	Complete	0.2	136(0.053,0.810)	190(0.049,0.815)	269(0.054,0.822)
		0.25	85(0.052,0.825)	119(0.054,0.818)	169(0.052,0.825)
		0.3	59(0.056,0.839)	82(0.060,0.824)	116(0.055,0.822)
	IM	0.2	152(0.049,0.813)	206(0.054,0.816)	285(0.051,0.808)
		0.25	96(0.048,0.828)	130(0.054,0.823)	180(0.049,0.818)
		0.3	66(0.058,0.813)	89(0.060,0.830)	123(0.056,0.820)
	MM	0.2	154(0.057,0.823)	213(0.053,0.812)	299(0.046,0.809)
		0.25	97(0.058,0.821)	134(0.054,0.821)	188(0.053,0.816)
		0.5	66(0.056,0.827)	92(0.058,0.831)	129(0.060,0.833)

Table 5: Sample size (empirical type I error, empirical power) for the comparison of TAR with $\theta = 2$ and $\bar{r} = 0.6$

		β_2	$\rho = 0.1$	$\rho = 0.3$	$\rho = 0.5$
CS	Complete	0.2	344(0.054,0.816)	572(0.062,0.803)	801(0.062,0.786)
		0.25	216(0.058,0.821)	360(0.058,0.805)	504(0.057,0.801)
		0.3	148(0.059,0.817)	246(0.056,0.813)	344(0.055,0.800)
	IM	0.2	376(0.052,0.813)	604(0.059,0.808)	833(0.061,0.787)
		0.25	237(0.056,0.809)	380(0.062,0.788)	524(0.052,0.808)
		0.3	162(0.054,0.830)	260(0.057,0.803)	358(0.059,0.794)
	MM	0.2	384(0.054,0.818)	628(0.055,0.805)	872(0.059,0.791)
		0.25	242(0.056,0.806)	395(0.055,0.791)	549(0.058,0.798)
		0.3	165(0.053,0.809)	270(0.056,0.803)	375(0.057,0.796)
AR(1)	Complete	0.2	271(0.047,0.807)	379(0.053,0.816)	537(0.051,0.823)
		0.25	170(0.053,0.818)	238(0.054,0.817)	338(0.053,0.820)
		0.3	117(0.064,0.826)	163(0.057,0.814)	231(0.051,0.823)
	IM	0.2	304(0.049,0.800)	412(0.057,0.823)	570(0.054,0.815)
		0.25	191(0.054,0.806)	259(0.051,0.816)	359(0.048,0.828)
		0.3	131(0.054,0.812)	177(0.055,0.816)	245(0.063,0.814)
	MM	0.2	308(0.053,0.824)	426(0.061,0.824)	597(0.058,0.823)
		0.25	194(0.052,0.813)	268(0.057,0.828)	376(0.053,0.815)
		0.5	132(0.054,0.819)	183(0.053,0.827)	257(0.048,0.816)

Table 6: Sample size (empirical type I error, empirical power) for the comparison of TAR with $\theta = 3$ and $\bar{r} = 0.6$

		β_2	$\rho = 0.1$	$\rho = 0.3$	$\rho = 0.5$
CS	Complete	0.2	515(0.052,0.813)	858(0.057,0.802)	1201(0.071,0.787)
		0.25	324(0.051,0.814)	540(0.061,0.800)	756(0.063,0.792)
		0.3	222(0.055,0.822)	369(0.051,0.802)	516(0.063,0.799)
	IM	0.2	564(0.056,0.802)	906(0.055,0.811)	1249(0.061,0.788)
		0.25	355(0.049,0.817)	570(0.058,0.810)	786(0.061,0.788)
		0.3	242(0.058,0.812)	390(0.051,0.803)	537(0.063,0.798)
	MM	0.2	576(0.052,0.806)	942(0.066,0.789)	1307(0.058,0.806)
		0.25	362(0.055,0.822)	592(0.058,0.801)	823(0.061,0.790)
		0.3	247(0.056,0.807)	405(0.054,0.801)	562(0.063,0.807)
AR(1)	Complete	0.2	406(0.053,0.820)	568(0.056,0.819)	805(0.058,0.810)
		0.25	255(0.055,0.825)	357(0.047,0.819)	506(0.053,0.807)
		0.3	175(0.056,0.824)	244(0.059,0.825)	346(0.049,0.829)
	IM	0.2	455(0.052,0.816)	618(0.063,0.825)	855(0.056,0.821)
		0.25	286(0.057,0.813)	389(0.052,0.820)	538(0.052,0.803)
		0.3	196(0.053,0.824)	266(0.057,0.814)	367(0.056,0.814)
	MM	0.2	461(0.058,0.812)	639(0.044,0.814)	896(0.057,0.802)
		0.25	290(0.052,0.824)	402(0.058,0.822)	564(0.055,0.809)
		0.5	198(0.056,0.824)	275(0.049,0.817)	385(0.051,0.812)

Table 7: Sample size (empirical type I error, empirical power) for the comparison of slopes with $\theta = 1$ and $\bar{r} = 0.4$

		β_4	$\rho = 0.1$	$\rho = 0.3$	$\rho = 0.5$
CS	Complete	0.05	394(0.049,0.793)	313(0.044,0.798)	233(0.051,0.801)
		0.075	168(0.056,0.808)	134(0.051,0.811)	101(0.063,0.808)
		0.1	91(0.055,0.810)	73(0.063,0.806)	55(0.063,0.796)
	IM	0.05	457(0.056,0.791)	377(0.051,0.803)	296(0.048,0.818)
		0.075	195(0.046,0.809)	161(0.057,0.800)	127(0.059,0.813)
		0.1	105(0.051,0.811)	87(0.058,0.801)	70(0.055,0.821)
	MM	0.05	459(0.056,0.816)	382(0.053,0.798)	304(0.058,0.815)
		0.075	195(0.054,0.796)	163(0.055,0.794)	131(0.056,0.798)
		0.1	105(0.064,0.815)	88(0.061,0.808)	71(0.067,0.789)
AR(1)	Complete	0.05	478(0.049,0.806)	560(0.054,0.806)	606(0.056,0.794)
		0.075	203(0.058,0.810)	238(0.052,0.818)	258(0.048,0.812)
		0.1	110(0.062,0.803)	128(0.058,0.801)	139(0.048,0.802)
	IM	0.05	542(0.050,0.813)	626(0.056,0.810)	672(0.049,0.810)
		0.075	230(0.059,0.816)	266(0.056,0.796)	286(0.059,0.816)
		0.1	124(0.052,0.793)	143(0.044,0.828)	154(0.052,0.804)
	MM	0.05	547(0.048,0.810)	638(0.051,0.819)	691(0.049,0.795)
		0.075	232(0.057,0.806)	271(0.052,0.804)	294(0.054,0.813)
		0.1	125(0.060,0.817)	146(0.053,0.798)	158(0.056,0.804)

Table 8: Sample size (empirical type I error, empirical power) for the comparison of slopes with $\theta = 2$ and $\bar{r} = 0.4$

		β_4	$\rho = 0.1$	$\rho = 0.3$	$\rho = 0.5$
CS	Complete	0.05	787(0.045,0.791)	626(0.054,0.811)	466(0.063,0.790)
		0.075	335(0.052,0.812)	268(0.057,0.809)	201(0.058,0.826)
		0.1	181(0.050,0.806)	145(0.049,0.818)	110(0.061,0.806)
	IM	0.05	914(0.056,0.789)	753(0.047,0.802)	591(0.053,0.770)
		0.075	389(0.055,0.812)	321(0.056,0.800)	254(0.053,0.805)
		0.1	210(0.053,0.817)	174(0.056,0.814)	139(0.065,0.803)
	MM	0.05	918(0.046,0.802)	763(0.053,0.798)	608(0.071,0.790)
		0.075	390(0.051,0.809)	325(0.054,0.804)	261(0.062,0.800)
		0.1	210(0.055,0.809)	176(0.068,0.806)	142(0.067,0.799)
AR(1)	Complete	0.05	955(0.056,0.808)	1120(0.049,0.814)	1211(0.052,0.818)
		0.075	406(0.049,0.802)	476(0.054,0.817)	515(0.048,0.821)
		0.1	219(0.051,0.811)	256(0.062,0.810)	278(0.054,0.814)
	IM	0.05	1084(0.061,0.802)	1251(0.050,0.807)	1343(0.044,0.790)
		0.075	460(0.065,0.809)	531(0.063,0.806)	571(0.053,0.814)
		0.1	248(0.052,0.806)	286(0.056,0.792)	308(0.061,0.802)
	MM	0.05	1093(0.051,0.800)	1276(0.054,0.804)	1381(0.051,0.790)
		0.075	464(0.058,0.794)	542(0.050,0.808)	587(0.054,0.809)
		0.1	250(0.051,0.810)	292(0.054,0.822)	316(0.060,0.802)

Table 9: Sample size (empirical type I error, empirical power) for the comparison of slopes with $\theta = 3$ and $\bar{r} = 0.4$

		β_4	$\rho = 0.1$	$\rho = 0.3$	$\rho = 0.5$
CS	Complete	0.05	1180(0.051,0.791)	939(0.068,0.797)	698(0.058,0.804)
		0.075	502(0.060,0.802)	402(0.052,0.825)	301(0.060,0.803)
		0.1	271(0.051,0.825)	218(0.057,0.817)	165(0.061,0.812)
	IM	0.05	1371(0.051,0.804)	1129(0.053,0.798)	886(0.064,0.799)
		0.075	583(0.054,0.812)	482(0.046,0.813)	381(0.066,0.807)
		0.1	314(0.057,0.812)	261(0.054,0.822)	208(0.061,0.819)
	MM	0.05	1377(0.048,0.805)	1145(0.060,0.805)	912(0.072,0.800)
		0.075	585(0.056,0.803)	488(0.066,0.806)	391(0.059,0.793)
		0.1	315(0.051,0.809)	264(0.062,0.796)	212(0.061,0.797)
AR(1)	Complete	0.05	1433(0.045,0.790)	1679(0.056,0.799)	1816(0.047,0.810)
		0.075	608(0.051,0.806)	713(0.056,0.817)	772(0.052,0.821)
		0.1	328(0.051,0.789)	384(0.054,0.808)	417(0.050,0.810)
	IM	0.05	1626(0.051,0.803)	1876(0.060,0.792)	2014(0.044,0.813)
		0.075	690(0.052,0.819)	797(0.050,0.817)	856(0.051,0.801)
		0.1	372(0.055,0.812)	429(0.051,0.820)	462(0.054,0.821)
	MM	0.05	1639(0.050,0.812)	1914(0.061,0.812)	2072(0.046,0.809)
		0.075	696(0.052,0.812)	812(0.050,0.832)	880(0.054,0.803)
		0.1	374(0.051,0.811)	437(0.053,0.821)	474(0.050,0.818)

Table 10: Sample size (empirical type I error, empirical power) for the comparison of slopes with $\theta = 1$ and $\bar{r} = 0.6$

		β_4	$\rho = 0.1$	$\rho = 0.3$	$\rho = 0.5$
CS	Complete	0.05	407(0.059,0.792)	323(0.051,0.806)	239(0.055,0.797)
		0.075	176(0.059,0.819)	140(0.053,0.804)	104(0.059,0.800)
		0.1	97(0.061,0.804)	77(0.064,0.790)	58(0.065,0.803)
	IM	0.05	473(0.044,0.801)	388(0.059,0.810)	304(0.049,0.793)
		0.075	205(0.050,0.800)	168(0.051,0.806)	132(0.061,0.804)
		0.1	112(0.056,0.788)	93(0.056,0.803)	73(0.055,0.805)
	MM	0.05	475(0.045,0.802)	394(0.054,0.803)	314(0.046,0.801)
		0.075	205(0.055,0.816)	171(0.062,0.804)	136(0.054,0.792)
		0.1	113(0.059,0.796)	94(0.054,0.802)	75(0.059,0.793)
AR(1)	Complete	0.05	494(0.050,0.796)	579(0.053,0.810)	626(0.059,0.817)
		0.075	214(0.047,0.801)	250(0.058,0.803)	271(0.055,0.803)
		0.1	117(0.057,0.801)	137(0.052,0.813)	148(0.052,0.798)
	IM	0.05	561(0.053,0.797)	647(0.049,0.805)	694(0.053,0.798)
		0.075	242(0.049,0.814)	280(0.058,0.806)	300(0.047,0.800)
		0.1	133(0.057,0.806)	153(0.058,0.802)	165(0.057,0.803)
	MM	0.05	566(0.044,0.819)	660(0.051,0.804)	715(0.051,0.810)
		0.075	244(0.061,0.810)	285(0.056,0.808)	309(0.059,0.801)
		0.1	134(0.048,0.810)	156(0.054,0.803)	169(0.051,0.800)

Table 11: Sample size (empirical type I error, empirical power) for the comparison of slopes with $\theta = 2$ and $\bar{r} = 0.6$

		β_4	$\rho = 0.1$	$\rho = 0.3$	$\rho = 0.5$
CS	Complete	0.05	813(0.052,0.811)	645(0.054,0.818)	477(0.063,0.802)
		0.075	352(0.064,0.808)	280(0.054,0.814)	208(0.054,0.794)
		0.1	193(0.052,0.813)	154(0.056,0.800)	115(0.064,0.821)
	IM	0.05	945(0.050,0.797)	776(0.058,0.805)	607(0.063,0.796)
		0.075	409(0.060,0.820)	336(0.057,0.804)	264(0.058,0.790)
		0.1	224(0.056,0.811)	185(0.063,0.808)	146(0.067,0.799)
	MM	0.05	950(0.057,0.801)	788(0.053,0.799)	627(0.063,0.788)
		0.075	410(0.049,0.799)	341(0.056,0.804)	272(0.060,0.806)
		0.1	225(0.059,0.808)	187(0.056,0.795)	150(0.054,0.810)
AR(1)	Complete	0.05	988(0.050,0.818)	1158(0.054,0.813)	1251(0.043,0.803)
		0.075	427(0.056,0.800)	500(0.043,0.813)	541(0.052,0.808)
		0.1	234(0.051,0.808)	274(0.057,0.789)	296(0.053,0.801)
	IM	0.05	1122(0.054,0.810)	1294(0.053,0.810)	1388(0.048,0.797)
		0.075	484(0.058,0.807)	559(0.053,0.793)	600(0.055,0.797)
		0.1	265(0.058,0.806)	306(0.060,0.813)	329(0.046,0.802)
	MM	0.05	1131(0.049,0.829)	1320(0.050,0.819)	1429(0.043,0.801)
		0.075	488(0.046,0.802)	570(0.056,0.824)	617(0.051,0.799)
		0.1	267(0.049,0.809)	312(0.053,0.809)	338(0.055,0.810)

Table 12: Sample size (empirical type I error, empirical power) for the comparison of slopes with $\theta = 3$ and $\bar{r} = 0.6$

		β_4	$\rho = 0.1$	$\rho = 0.3$	$\rho = 0.5$
CS	Complete	0.05	1220(0.049,0.814)	968(0.051,0.804)	715(0.070,0.800)
		0.075	527(0.049,0.808)	420(0.066,0.809)	312(0.056,0.787)
		0.1	289(0.056,0.804)	231(0.055,0.815)	173(0.068,0.807)
	IM	0.05	1418(0.048,0.801)	1164(0.058,0.802)	910(0.064,0.793)
		0.075	613(0.053,0.807)	504(0.054,0.814)	396(0.056,0.797)
		0.1	336(0.056,0.796)	277(0.065,0.803)	218(0.060,0.819)
	MM	0.05	1424(0.051,0.807)	1182(0.059,0.791)	940(0.067,0.794)
		0.075	615(0.051,0.811)	511(0.057,0.788)	408(0.056,0.794)
		0.1	337(0.053,0.816)	281(0.059,0.814)	225(0.067,0.806)
AR(1)	Complete	0.05	1482(0.051,0.816)	1737(0.052,0.801)	1877(0.058,0.817)
		0.075	640(0.053,0.804)	750(0.054,0.811)	811(0.057,0.801)
		0.1	350(0.057,0.800)	411(0.051,0.810)	444(0.053,0.820)
	IM	0.05	1683(0.047,0.813)	1940(0.047,0.811)	2082(0.047,0.816)
		0.075	726(0.057,0.804)	838(0.047,0.827)	899(0.058,0.808)
		0.1	398(0.050,0.821)	459(0.048,0.808)	493(0.053,0.825)
	MM	0.05	1696(0.056,0.813)	1980(0.050,0.810)	2143(0.047,0.814)
		0.075	732(0.051,0.821)	855(0.060,0.808)	925(0.064,0.814)
		0.1	401(0.050,0.806)	468(0.054,0.810)	507(0.049,0.806)