

TABLE 1: Estimated Type I error rates when independent variables and measurement errors are all normal, and reliability of W_1 and W_2 both equal 0.90.

N	Correlation between X_1 and X_2				
	0.0	0.2	0.4	0.6	0.8
25% of variance in Y is explained by X_1					
50	0.0476 [†]	0.0505 [†]	0.0636	0.0715	0.0913
100	0.0504 [†]	0.0521 [†]	0.0834	0.0940	0.1294
250	0.0467 [†]	0.0533 [†]	0.1402	0.1624	0.2544
500	0.0468 [†]	0.0595 [†]	0.2300	0.2892	0.4649
1,000	0.0505 [†]	0.0734	0.4094	0.5057	0.7431
50% of variance in Y is explained by X_1					
50	0.0460 [†]	0.0520 [†]	0.0963	0.1106	0.1633
100	0.0535 [†]	0.0569 [†]	0.1461	0.1857	0.2837
250	0.0483 [†]	0.0625	0.3068	0.3731	0.5864
500	0.0515 [†]	0.0780	0.5323	0.6488	0.8837
1,000	0.0481 [†]	0.1185	0.8273	0.9088	0.9907
75% of variance in Y is explained by X_1					
50	0.0485 [†]	0.0579 [†]	0.1727	0.2089	0.3442
100	0.0541 [†]	0.0679	0.3101	0.3785	0.6031
250	0.0479 [†]	0.0856	0.6450	0.7523	0.9434
500	0.0445 [†]	0.1323	0.9109	0.9635	0.9992
1,000	0.0522 [†]	0.2179	0.9959	0.9998	1.0000

[†]Not significantly different from 0.05, Bonferroni corrected for 7,500 tests.