TABLE 2
Demonstration of Hurwicz Bias in an ARDL Model:
$$y_t = 1 + 1x_t + \beta_y y_{t-1} + u_t; \quad \text{LRP of } x = 1/(1 - \beta_y)$$

True Value of β_y / True Value of LRP of x	SAMPLE SIZE		
	T=10	T=50	T=1000
Median Value of Estimated LRP of x			
0.10 / 1.11	1.1	1.1	1.1
0.50 / 2	1.6	1.9	2.0
0.90 / 10	2.8	7.5	9.9
0.95 / 20	2.8	11.4	19.5
0.99 / 100	2.7	16.0	85.9
90 Percent Empirical Sample Range for Estimated LRP of x			
0.10 / 1.11	0.3 — 2.3	0.8 — 1.5	1.0 — 1.2
0.50 / 2	0.4 — 5.0	1.3 — 2.8	1.8 — 2.2
0.90 / 10	-13.2 — 21.9	3.4 — 19.4	8.3 — 11.7
0.95 / 20	-18.1 — 25.2	3.9 — 45.7	15.3 — 24.8
0.99 / 100	-24.6 — 28.8	-72.1 — 125.4	51.2 — 152.9
Type I Error Rate (H_0: LRP of x = true value)			
0.10 / 1.11	0.104	0.064	0.050
0.50 / 2	0.185	0.081	0.051
0.90 / 10	0.530	0.267	0.069
0.95 / 20	0.661	0.393	0.084
0.99 / 100	0.844	0.681	0.197

SOURCE: All Monte Carlo experiments were run using Version 13 of Stata. 10,000 replications were run for each experiment. The experiments are described in more detail in Section III of the text. The associated simulation programs are given in "TABLE2A" and "TABLE2B" in the Appendix.

TABLE 3
Demonstration of Hurwicz Bias in DPD Model:
$$y_{it} = 1 + 1x_{it} + \beta_y y_{i,t-1} + \varepsilon_{it}; \quad \text{LRP of } x = 1/(1 - \beta_y); \quad N=50, T=10$$

True Value of β_y / *True Value of LRP of x*	*Anderson-Hsaio*	*ESTIMATOR* *Difference GMM*	*System GMM*
Median Value of Estimated LRP of x			
0.10 / 1.11	1.1	1.1	1.1
0.50 / 2	1.9	1.8	2.0
0.90 / 10	0.6	5.1	25.6
0.95 / 20	2.5	10.8	-56.1
0.99 / 100	8.3	34.7	-22.2
Average 90 Percent Empirical Sample Range for Estimated LRP of x			
0.10 / 1.11	0.9 — 1.3	1.0 — 1.2	1.0 — 1.2
0.50 / 2	1.3 — 3.5	1.6 — 2.1	1.7 — 2.3
0.90 / 10	-5.9 — 7.0	3.3 — 8.3	11.4 — 99.7
0.95 / 20	-27.3 — 27.8	6.6 — 21.1	-332.5 — 225.6
0.99 / 100	-99.4 — 105.0	13.1 — 170.0	-30.0 — -17.9
Average Type I Error Rate (H_0: LRP of x = true value)			
0.10 / 1.11	0.053	0.083	0.088
0.50 / 2	0.077	0.194	0.110
0.90 / 10	0.709	0.821	0.001
0.95 / 20	0.514	0.642	0.499
0.99 / 100	0.524	0.585	1.000

SOURCE: All Monte Carlo experiments were run using Version 13 of Stata. 10,000 replications were run for each experiment. The experiments are described in more detail in Section IV of the text. The associated simulation programs are given in "TABLE3A" and "TABLE3B" in the Appendix.

TABLE 4
Demonstration of Hurwicz Bias in DPD Model:
$$y_{it} = 1 + 1x_{it} + \beta_y y_{i,t-1} + \varepsilon_{it}; \quad \text{LRP of } x = 1/(1 - \beta_y); \quad N=140, \ T=5$$

True Value of β_y / True Value of LRP of x	ESTIMATOR		
	Anderson-Hsaio	Difference GMM	System GMM
Median Value of Estimated LRP of x			
0.10 / 1.11	1.1	1.1	1.1
0.50 / 2	2.0	1.8	1.9
0.90 / 10	0.8	3.4	25.2
0.95 / 20	1.8	7.7	-57.2
0.99 / 100	8.3	25.6	-22.1
Average 90 Percent Empirical Sample Range for Estimated LRP of x			
0.10 / 1.11	0.9 — 1.3	1.0 — 1.2	1.0 — 1.2
0.50 / 2	1.4 — 3.3	1.6 — 2.2	1.7 — 2.3
0.90 / 10	-8.7 — 9.6	2.1 — 6.2	10.8 — 105.2
0.95 / 20	-22.0 — 21.5	4.5 — 19.1	-263.0 — -21.4
0.99 / 100	-103.1 — 105.6	-86.0 — 148.9	-27.2 — -18.6
Average Type I Error Rate (H_0: LRP of x = true value)			
0.10 / 1.11	0.052	0.083	0.095
0.50 / 2	0.073	0.191	0.143
0.90 / 10	0.640	0.921	0.001
0.95 / 20	0.583	0.746	0.618
0.99 / 100	0.540	0.618	1.000

SOURCE: All Monte Carlo experiments were run using Version 13 of Stata. 10,000 replications were run for each experiment. The experiments are described in more detail in Section IV of the text. The associated simulation programs are given in "TABLE4A" and "TABLE4B" in the Appendix.