Figure 1: Simulation with $B = 1000$, $p = 2$, $\mu_\alpha = 10$, $X_{i,t} \overset{iid}{\sim} \Gamma(1, 10)$, $\delta_i \sim \mathcal{N}(2\mathbf{1}_p, \sigma_\delta^2 \mathbf{I}_p)$, $\gamma_i \sim \mathcal{N}(2\mathbf{1}_p, \sigma_\gamma^2 \mathbf{I}_p)$

		Bias		Distance to α_1			Consistency		
$\sigma_\alpha = \sigma_\delta = \sigma_\gamma$	n	$\lvert\hat{\alpha}^\dagger_{\text{adj}} - \text{E}(\hat{\alpha}_{\text{adj}})\rvert$	$\lvert\hat{\alpha}^\dagger_{\text{wadj}} - \text{E}(\hat{\alpha}_{\text{wadj}})\rvert$	$\hat{\alpha}_{\text{adj}}$	$\hat{\alpha}_{\text{wadj}}$	$\hat{\alpha}_{\text{IVW}}$	$\hat{\alpha}_{\text{adj}}$	$\hat{\alpha}_{\text{wadj}}$	$\hat{\alpha}_{\text{IVW}}$
0.01	5	0.427	31.551	18.782	31.543	20.433	1	1	1
	10	0.345	0.229	9.050	0.231	10.958	1	1	1
	15	0.366	0.484	26.292	0.483	26.787	1	1	1
	25	0.051	0.354	15.215	0.350	16.792	1	1	1
0.1	5	0.411	8.599	20.659	8.683	16.075	1	1	1
	10	0.004	1.130	31.834	1.121	31.999	1	1	1
	15	0.252	0.866	38.477	0.842	36.201	1	1	1
	25	0.017	4.273	54.846	4.297	56.049	1	1	1
1	5	0.559	163.417	170.584	165.212	169.204	1	1	1
	10	0.732	19.168	1.209	17.658	1.682	1	1	1
	15	0.191	29.582	64.219	29.695	64.982	0	0	0
	25	0.098	11.948	10.795	10.349	13.788	1	1	1
10	5	2.643	70.552	35.244	75.090	32.894	1	0	1
	10	2.169	402.211	492.828	396.902	477.584	0	0	0
	15	1.652	233.576	122.126	226.641	51.038	0	0	0
	25	1.361	32.038	141.835	38.483	144.553	1	1	1

Figure 2: Simulation with $B = 1000$, $p = 2$, $\mu_\alpha = 10$, $X_{i,t} \overset{iid}{\sim} \Gamma(1, 10)$, $\delta_i \sim \mathcal{N}(2\mathbf{1}_p, \sigma_\delta^2 \mathbf{I}_p)$, $\gamma_i \sim \mathcal{N}(2\mathbf{1}_p, \sigma_\gamma^2 \mathbf{I}_p)$, $n = 10$

		Bias		Distance to α_1			Consistency		
$\sigma_\alpha = \sigma_\delta = \sigma_\gamma$	σ	$\lvert\hat{\alpha}^\dagger_{\text{adj}} - \text{E}(\hat{\alpha}_{\text{adj}})\rvert$	$\lvert\hat{\alpha}^\dagger_{\text{wadj}} - \text{E}(\hat{\alpha}_{\text{wadj}})\rvert$	$\hat{\alpha}_{\text{adj}}$	$\hat{\alpha}_{\text{wadj}}$	$\hat{\alpha}_{\text{IVW}}$	$\hat{\alpha}_{\text{adj}}$	$\hat{\alpha}_{\text{wadj}}$	$\hat{\alpha}_{\text{IVW}}$
0.01	0.01	0.005	26.505	68.635	26.523	70.356	1	1	1
	0.1	0.008	32.825	66.651	32.833	66.038	1	1	1
	1	0.209	55.052	77.779	55.048	78.677	1	1	1
	10	0.659	8.906	18.182	8.942	16.392	1	1	1
0.1	0.01	0.041	4.850	48.389	4.856	48.773	1	1	1
	0.1	0.022	9.665	28.105	9.704	32.457	1	1	1
	1	0.284	7.249	34.603	7.087	33.139	1	1	1
	10	4.720	1.418	23.743	1.188	18.955	1	1	1
1	0.01	0.249	126.966	144.470	126.197	145.266	1	1	1
	0.1	0.344	1.140	37.688	0.809	36.918	1	1	1
	1	0.744	39.141	44.573	38.778	45.929	0	0	0
	10	0.557	5.551	5.608	6.090	0.695	1	1	1
10	0.01	2.555	195.978	198.593	195.032	194.004	0	0	0
	0.1	3.715	356.227	381.530	362.799	385.934	1	1	1
	1	0.820	532.508	463.159	536.718	477.354	0	0	0
	10	5.600	297.116	89.179	276.026	86.527	0	0	0

Figure 3: Simulation with $B = 1000$, $p = 2$, $\mu_\alpha = 10$, $X_{i,t} \overset{iid}{\sim} \mathcal{N}(10, 10)$, $\delta_i \sim \mathcal{N}(2\mathbf{1}_p, \sigma_\delta^2 \mathbf{I}_p)$, $\gamma_i \sim \mathcal{N}(2\mathbf{1}_p, \sigma_\gamma^2 \mathbf{I}_p)$

		Bias		Distance to α_1			Consistency		
$\sigma_\alpha = \sigma_\delta = \sigma_\gamma$	n	$\lvert\hat{\alpha}^\dagger_{\text{adj}} - \text{E}(\hat{\alpha}_{\text{adj}})\rvert$	$\lvert\hat{\alpha}^\dagger_{\text{wadj}} - \text{E}(\hat{\alpha}_{\text{wadj}})\rvert$	$\hat{\alpha}_{\text{adj}}$	$\hat{\alpha}_{\text{wadj}}$	$\hat{\alpha}_{\text{IVW}}$	$\hat{\alpha}_{\text{adj}}$	$\hat{\alpha}_{\text{wadj}}$	$\hat{\alpha}_{\text{IVW}}$
0.01	5	0.261	6.226	9.817	6.246	11.876	1	1	1
	10	0.026	67.109	70.703	67.091	70.475	1	1	1
	15	0.160	0.418	37.747	0.427	39.294	1	1	0
	25	0.081	1.324	43.263	1.278	44.056	1	1	1
0.1	5	0.556	1.153	3.147	1.176	4.424	1	1	1
	10	0.076	3.897	51.714	3.877	53.642	1	1	1
	15	0.083	7.656	13.325	7.683	14.124	1	1	1
	25	0.029	0.666	27.716	0.646	25.711	1	1	1
1	5	0.613	11.998	40.189	12.346	41.000	1	1	1
	10	0.969	46.131	3.982	47.802	5.740	1	1	1
	15	0.349	17.527	32.923	17.757	32.635	1	1	1
	25	0.012	22.422	19.373	22.514	18.918	1	1	1
10	5	6.004	213.822	197.780	220.413	194.041	0	0	0
	10	3.039	754.690	494.622	747.898	476.112	0	0	0
	15	0.923	302.770	242.758	287.948	245.405	1	1	1
	25	1.703	298.133	207.077	322.499	218.913	0	0	0

Figure 4: Simulation with $B = 1000$, $p = 2$, $\mu_\alpha = 10$, $X_{i,t} \overset{iid}{\sim} \Gamma(1, 10)$, $\delta_i \sim \mathcal{N}(2\mathbf{1}_p, \sigma_\delta^2 \mathbf{I}_p)$, $\gamma_i \sim \mathcal{N}(2\mathbf{1}_p, \sigma_\gamma^2 \mathbf{I}_p)$, $n = 10$

		Bias		Distance to α_1			Consistency		
$\sigma_\alpha = \sigma_\delta = \sigma_\gamma$	σ	$\lvert\hat{\alpha}^\dagger_{\text{adj}} - \text{E}(\hat{\alpha}_{\text{adj}})\rvert$	$\lvert\hat{\alpha}^\dagger_{\text{wadj}} - \text{E}(\hat{\alpha}_{\text{wadj}})\rvert$	$\hat{\alpha}_{\text{adj}}$	$\hat{\alpha}_{\text{wadj}}$	$\hat{\alpha}_{\text{IVW}}$	$\hat{\alpha}_{\text{adj}}$	$\hat{\alpha}_{\text{wadj}}$	$\hat{\alpha}_{\text{IVW}}$
0.01	0.01	0.009	5.558	30.823	5.559	31.390	1	1	1
	0.1	0.001	0.169	4.072	0.162	1.176	1	1	1
	1	0.766	16.604	37.504	16.621	35.608	1	1	1
	10	3.169	9.673	59.918	9.860	57.710	1	0	1
0.1	0.01	0.024	29.621	71.619	29.792	71.856	0	0	0
	0.1	0.020	3.244	24.438	3.301	20.709	1	1	1
	1	0.031	17.347	52.090	17.399	54.809	1	1	1
	10	1.969	19.863	55.848	19.521	56.731	1	1	1
1	0.01	0.102	38.132	99.657	40.849	99.075	1	0	1
	0.1	0.840	10.813	11.913	11.610	11.229	1	1	1
	1	0.300	59.262	3.435	59.195	0.154	1	1	1
	10	0.027	23.931	34.353	24.517	36.478	1	1	1
10	0.01	2.659	282.806	83.313	272.595	102.973	0	0	0
	0.1	2.148	75.597	103.570	88.656	85.908	1	0	1
	1	1.339	642.765	591.299	647.793	571.320	0	0	0
	10	8.033	105.833	166.808	118.156	171.404	0	0	0