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Supplementary material

NONLINEAR RELATIONSHIP BETWEEN HOUSING SUPPLY AND HOUSE PRICE IN MALAYSIA

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Table S1. Full MG results of linear model

	Coef.	Std. Err.	t	p-value
Long-run equation for detached housing supply				
β_1	–0.2895	0.8242	–0.35	0.725
β_2	0.4714	0.9581	0.49	0.623
β_3	1.5466	0.8790	1.76	0.078
Short-run equation for detached housing supply				
ρ	–0.7251	0.1540	–4.71	0.000
λ_1	1.2743	2.0917	0.61	0.542
λ_2	–1.6674	1.4754	–1.13	0.258
λ_3	1.1018	1.2237	0.9	0.368
τ	–0.2474	0.2335	–1.06	0.289
Intercept	2.7775	1.5706	1.77	0.077
Long-run equation for high-rise housing supply				
β_1	0.6482	0.5708	1.14	0.256
β_2	–2.6778	0.6697	–4	0.000
β_3	1.5531	0.9110	1.7	0.088
Short-run equation for high-rise housing supply				
ρ	–0.6292	0.1401	–4.49	0.000
λ_1	2.7244	2.3687	1.15	0.250
λ_2	0.2255	1.2813	0.18	0.860
λ_3	–0.1826	1.0661	–0.17	0.864
τ	0.3355	0.2162	1.55	0.121
Intercept	9.5823	2.8367	3.38	0.001
Long-run equation for semi-detached housing supply				
β_1	–0.5740	0.3694	–1.55	0.120
β_2	0.4021	0.3873	1.04	0.299
β_3	0.4609	0.4288	1.07	0.282

End of Table S1

	Coef.	Std. Err.	t	p-value
Short-run equation for semi-detached housing supply				
ρ	–0.7241	0.1374	–5.27	0.000
λ_1	0.8961	1.1415	0.79	0.432
λ_2	–0.2204	0.7016	–0.31	0.753
λ_3	1.0033	0.5808	1.73	0.084
τ	0.2362	0.1171	2.02	0.044
Intercept	6.0122	1.5491	3.88	0.000
Long-run equation for terraced housing supply				
β_1	0.6489	0.2800	2.32	0.021
β_2	–0.7372	0.4906	–1.5	0.133
β_3	–0.3171	0.5803	–0.55	0.585
Short-run equation for terraced housing supply				
ρ	–0.6705	0.1469	–4.57	0.000
λ_1	–0.0892	1.7671	–0.05	0.960
λ_2	0.6712	0.7581	0.89	0.376
λ_3	–0.1079	0.5225	–0.21	0.836
τ	–0.2155	0.1458	–1.48	0.139
Intercept	6.9334	1.8315	3.79	0.000

Table S2. Full PMG results of linear model

	Coef.	Std. Err.	t	p-value
Long-run equation				
$_\beta 1$	0.2569	0.2122	1.21	0.226
β_2	–0.4342	0.2749	–1.58	0.114
β_3	0.2524	0.3107	0.81	0.417
Short-run equation for detached housing supply				
ρ	–0.6263	0.1355	–4.62	0.000
λ_1	1.0574	1.9237	0.55	0.583
λ_2	–1.0341	1.3348	–0.77	0.439
λ_3	1.4461	1.1341	1.28	0.202
τ	–0.2038	0.1317	–1.55	0.122
Intercept	4.4627	1.0735	4.16	0.000
Short-run equation for high-rise housing supply				
ρ	–0.3842	0.1086	–3.54	0.000
λ_1	2.1210	2.3147	0.92	0.359
λ_2	0.2511	1.2487	0.2	0.841
λ_3	0.1931	1.0289	0.19	0.851
τ	0.0983	0.1087	0.9	0.366
Intercept	3.6109	1.1274	3.2	0.001
Short-run equation for semi-detached housing supply				
ρ	–0.6134	0.1260	–4.87	0.000
λ_1	0.8064	1.0942	0.74	0.461
λ_2	0.1760	0.6597	0.27	0.790
λ_3	0.9874	0.5526	1.79	0.074
τ	0.1114	0.0727	1.53	0.125
Intercept	5.0322	1.1650	4.32	0.000

End of Table S2

	Coef.	Std. Err.	t	p-value
Short-run equation for terraced housing supply				
ρ	–0.6133	0.1362	–4.5	0.000
λ_1	–0.2188	1.6632	–0.13	0.895
λ_2	0.6547	0.6281	1.04	0.297
λ_3	–0.2434	0.4789	–0.51	0.611
τ	–0.1566	0.0818	–1.91	0.056
Intercept	6.1383	1.4901	4.12	0.000

Table S3. Full MG results for nonlinear model

	Coef.	Std. Err.	t	p-value
Long-run equation for detached housing supply				
β_1	0.3309	21.9960	0.02	0.988
β_2	–0.1171	2.1109	–0.06	0.956
β_3	0.5209	1.3990	0.37	0.710
β_4	1.3120	0.9402	1.4	0.163
Short-run equation for detached housing supply				
ρ	–0.6666	0.1526	–4.37	0.000
λ_1	–102.5468	48.6005	–2.11	0.035
λ_2	10.3561	4.8389	2.14	0.032
λ_3	–1.1691	1.4813	–0.79	0.430
λ_4	1.2921	1.2134	1.06	0.287
τ	–0.1257	0.2695	–0.47	0.641
Intercept	2.5199	35.1394	0.07	0.943
Long-run equation for high-rise housing supply				
β_1	–16.8338	28.7021	–0.59	0.558
β_2	1.6683	2.7375	0.61	0.542
β_3	–2.1782	1.0595	–2.06	0.040
β_4	1.4344	0.9340	1.54	0.125
Short-run equation for high-rise housing supply				
ρ	–0.6412	0.1439	–4.45	0.000
λ_1	6.3623	58.2935	0.11	0.913
λ_2	–0.2992	5.9307	–0.05	0.960
λ_3	–0.1084	1.4418	–0.08	0.940
λ_4	0.0641	1.1594	0.06	0.956
τ	0.4428	0.2852	1.55	0.121
Intercept	37.6282	46.5592	0.81	0.419
Long-run equation for semi-detached housing supply				
β_1	22.9275	9.3492	2.45	0.014
β_2	–2.2444	0.8928	–2.51	0.012
β_3	–0.8380	0.5695	–1.47	0.141
β_4	0.6637	0.3500	1.9	0.058
Short-run equation for semi-detached housing supply				
ρ	–0.8756	0.1486	–5.89	0.000
λ_1	–13.8396	25.7186	–0.54	0.590
λ_2	1.4139	2.5973	0.54	0.586
λ_3	0.2800	0.7130	0.39	0.695
λ_4	0.4923	0.6059	0.81	0.417
τ	0.3039	0.1193	2.55	0.011

End of Table S3

	Coef.	Std. Err.	t	p-value
Intercept	–41.8610	21.3321	–1.96	0.050
Long-run equation for terraced housing supply				
β_1	23.4979	12.7049	1.85	0.064
β_2	–2.2035	1.2170	–1.81	0.070
β_3	–1.3217	0.5508	–2.4	0.016
β_4	–0.5767	0.5284	–1.09	0.275
Short-run equation for terraced housing supply				
ρ	–0.7558	0.1514	–4.99	0.000
λ_1	–33.2069	38.4735	–0.86	0.388
λ_2	3.2450	3.8774	0.84	0.403
λ_3	0.6948	0.7486	0.93	0.353
λ_4	–0.2451	0.5225	–0.47	0.639
τ	–0.3779	0.1711	–2.21	0.027
Intercept	–34.4209	24.0416	–1.43	0.152

Table S4. Full PMG results for nonlinear model

	Coef.	Std. Err.	t	p-value
Long-run equation				
β_1	22.0187	6.8630	3.21	0.001
β_2	–2.1201	0.6586	–3.22	0.001
β_3	–1.2460	0.3792	–3.29	0.001
β_4	0.3807	0.2614	1.46	0.145
Short-run equation for detached housing supply				
ρ	–0.6242	0.1259	–4.96	0.000
λ_1	–110.9020	37.3791	–2.97	0.003
λ_2	11.1120	3.7128	2.99	0.003
λ_3	–0.3468	1.2690	–0.27	0.785
λ_4	1.3051	1.0743	1.21	0.224
τ	–0.1130	0.1345	–0.84	0.401
Intercept	–28.2339	11.7346	–2.41	0.016
Short-run equation for high-rise housing supply				
ρ	–0.3807	0.1068	–3.57	0.000
λ_1	–13.3961	52.1819	–0.26	0.797
λ_2	1.5316	5.3147	0.29	0.773
λ_3	0.5388	1.2756	0.42	0.673
λ_4	0.0022	1.0291	0	0.998
τ	0.1057	0.1465	0.72	0.471
Intercept	–16.3148	7.7485	–2.11	0.035
Short-run equation for high-rise housing supply				
ρ	–0.8124	0.1345	–6.04	0.000
λ_1	–15.2473	23.4797	–0.65	0.516
λ_2	1.5527	2.3730	0.65	0.513
λ_3	0.5196	0.6305	0.82	0.410
λ_4	0.5994	0.5358	1.12	0.263
τ	0.2547	0.0939	2.71	0.007
Intercept	–35.8504	15.1477	–2.37	0.018

End of Table S4

	Coef.	Std. Err.	t	p-value
Short-run equation for terraced housing supply				
ρ	–0.6310	0.1347	–4.68	0.000
λ_1	–47.4573	31.7446	–1.49	0.135
λ_2	4.6890	3.1935	1.47	0.142
λ_3	1.0085	0.6066	1.66	0.096
λ_4	–0.4519	0.4752	–0.95	0.342
τ	–0.1858	0.0825	–2.25	0.024
Intercept	–26.6560	11.4861	–2.32	0.020