Appendix for Question 2

Question 2(a)

Dependent Variable: HOUSTNSA
Method: Least Squares
Date: 05/26/22 Time: 16:05
Sample: 1959M01 2022M02
Included observations: 758

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	92.87143	4.196054	22.13304	0.0000
JAN	-4.591741	5.910891	-0.776827	0.4375
FEB	-1.935491	5.910891	-0.327445	0.7434
MAR	26.18413	5.934117	4.412472	0.0000
APR	41.45238	5.934117	6.985434	0.0000
MAY	46.78571	5.934117	7.884191	0.0000
JUN	46.26349	5.934117	7.796188	0.0000
JUL	40.93651	5.934117	6.898500	0.0000
AUG	38.71429	5.934117	6.524018	0.0000
SEP	32.25238	5.934117	5.435077	0.0000
OCT	36.16984	5.934117	6.095236	0.0000
NOV	15.60000	5.934117	2.628866	0.0087

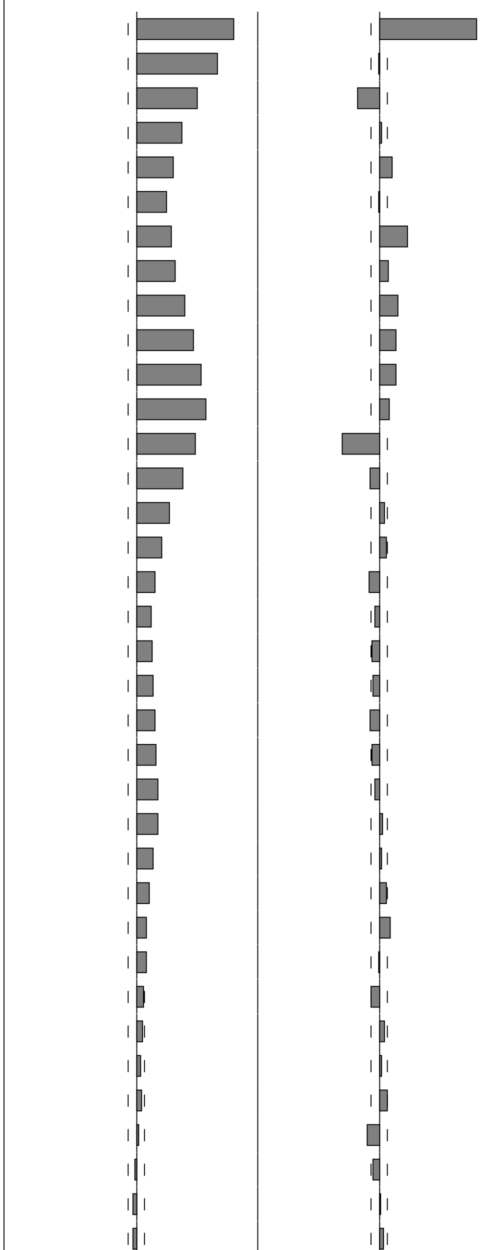
R-squared	0.239409	Mean dependent var	119.2789
Adjusted R-squared	0.228194	S.D. dependent var	37.91031
S.E. of regression	33.30515	Akaike info criterion	9.865006
Sum squared resid	827487.8	Schwarz criterion	9.938315
Log likelihood	-3726.837	Hannan-Quinn criter.	9.893239
F-statistic	21.34696	Durbin-Watson stat	0.118063
Prob(F-statistic)	0.000000		

Question 2(c)

Figure 1

Correlogram of Residuals Squared

Date: 05/26/22 Time: 17:50
Sample: 1959M01 2022M02
Included observations: 758



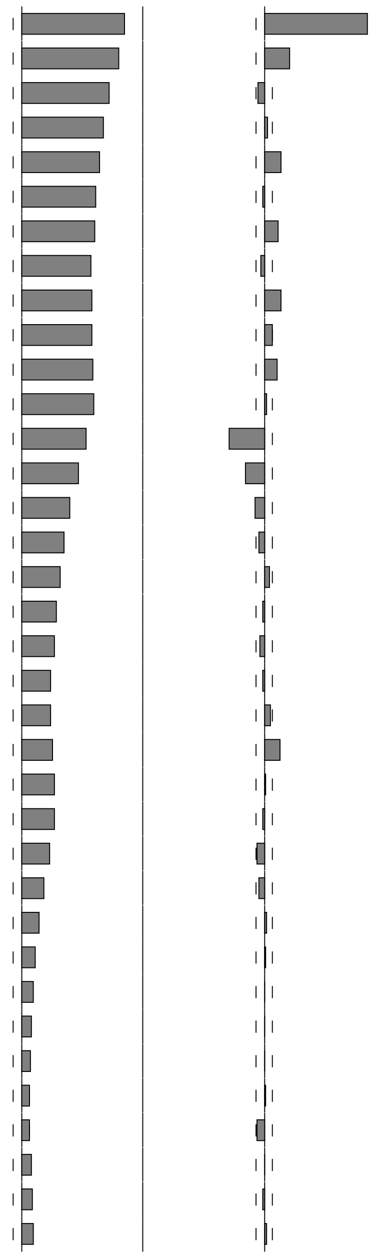
Autocorrelation	Partial Correlation		AC	PAC	Q-Stat	Prob
		1	0.835	0.835	530.19	0.000
		2	0.694	-0.008	897.50	0.000
		3	0.521	-0.185	1104.9	0.000
		4	0.393	0.024	1222.9	0.000
		5	0.318	0.114	1300.2	0.000
		6	0.262	-0.002	1352.7	0.000
		7	0.297	0.240	1420.3	0.000
		8	0.333	0.076	1505.3	0.000
		9	0.412	0.160	1635.9	0.000
		10	0.487	0.147	1818.6	0.000
		11	0.555	0.142	2056.3	0.000
		12	0.598	0.088	2332.6	0.000
		13	0.502	-0.312	2527.2	0.000
		14	0.397	-0.078	2649.3	0.000
		15	0.281	0.048	2710.6	0.000
		16	0.215	0.063	2746.5	0.000
		17	0.159	-0.087	2766.1	0.000
		18	0.129	-0.039	2779.1	0.000
		19	0.135	-0.063	2793.4	0.000
		20	0.143	-0.053	2809.4	0.000
		21	0.163	-0.080	2830.3	0.000
		22	0.170	-0.062	2852.9	0.000
		23	0.183	-0.038	2879.0	0.000
		24	0.186	0.027	2906.2	0.000
		25	0.144	0.016	2922.5	0.000
		26	0.108	0.061	2931.8	0.000
		27	0.088	0.091	2937.8	0.000
		28	0.084	-0.001	2943.5	0.000
		29	0.060	-0.072	2946.3	0.000
		30	0.049	0.041	2948.2	0.000
		31	0.040	0.022	2949.5	0.000
		32	0.047	0.071	2951.3	0.000
		33	0.021	-0.105	2951.6	0.000
		34	-0.010	-0.050	2951.7	0.000
		35	-0.027	0.009	2952.3	0.000
		36	-0.031	0.038	2953.1	0.000

Figure 2

Correlogram of Residuals Squared

Date: 05/26/22 Time: 17:52
Sample: 1959M01 2022M02
Included observations: 758

Autocorrelation Partial Correlation



	AC	PAC	Q-Stat	Prob
1	0.883	0.883	593.15	0.000
2	0.828	0.220	1115.4	0.000
3	0.752	-0.057	1547.4	0.000
4	0.698	0.030	1919.7	0.000
5	0.672	0.144	2264.9	0.000
6	0.632	-0.014	2570.9	0.000
7	0.626	0.120	2871.8	0.000
8	0.594	-0.031	3143.1	0.000
9	0.601	0.145	3421.2	0.000
10	0.600	0.070	3698.0	0.000
11	0.614	0.109	3988.5	0.000
12	0.618	0.018	4283.4	0.000
13	0.551	-0.298	4517.7	0.000
14	0.492	-0.160	4705.0	0.000
15	0.417	-0.075	4839.6	0.000
16	0.364	-0.042	4942.8	0.000
17	0.333	0.045	5029.0	0.000
18	0.302	-0.013	5100.0	0.000
19	0.281	-0.033	5161.4	0.000
20	0.253	-0.009	5211.4	0.000
21	0.253	0.056	5261.6	0.000
22	0.268	0.133	5317.8	0.000
23	0.280	0.016	5379.2	0.000
24	0.279	-0.016	5440.5	0.000
25	0.239	-0.058	5485.5	0.000
26	0.194	-0.044	5515.1	0.000
27	0.148	0.023	5532.3	0.000
28	0.115	0.012	5542.7	0.000
29	0.100	0.003	5550.6	0.000
30	0.087	0.008	5556.6	0.000
31	0.080	0.003	5561.6	0.000
32	0.071	0.010	5565.6	0.000
33	0.068	-0.059	5569.3	0.000
34	0.084	0.007	5574.9	0.000
35	0.093	-0.011	5581.9	0.000
36	0.100	0.017	5589.8	0.000

Question 2(d)

Dependent Variable: HOUSTNSA
Method: Least Squares
Date: 05/26/22 Time: 18:32
Sample (adjusted): 1959M03 2022M02
Included observations: 756 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-14.04274	2.164510	-6.487720	0.0000
JAN	11.01439	2.003361	5.497953	0.0000
FEB	20.08477	2.091415	9.603433	0.0000
MAR	47.48899	2.179416	21.78978	0.0000
APR	40.08198	2.652383	15.11169	0.0000
MAY	28.51071	2.359942	12.08111	0.0000
JUN	21.15332	2.198395	9.622164	0.0000
JUL	15.28781	2.122807	7.201696	0.0000
AUG	17.28754	2.067409	8.361936	0.0000
SEP	13.49059	2.094749	6.440194	0.0000
OCT	22.81052	2.048872	11.13321	0.0000
NOV	0.346771	2.168455	0.159916	0.8730
HOUSTNSA(-1)	0.775220	0.036137	21.45224	0.0000
HOUSTNSA(-2)	0.176881	0.036157	4.892042	0.0000

R-squared	0.915465	Mean dependent var	119.3362
Adjusted R-squared	0.913984	S.D. dependent var	37.94398
S.E. of regression	11.12840	Akaike info criterion	7.675222
Sum squared resid	91890.18	Schwarz criterion	7.760927
Log likelihood	-2887.234	Hannan-Quinn criter.	7.708234
F-statistic	618.1101	Durbin-Watson stat	2.016159
Prob(F-statistic)	0.000000		