Inspection of new elasticities (with standard errors, max 1 lags)

Simulation scheme

- 1000 draws from variance-covariance matrix of parameter estimates
- one-period shock (which is mathematically equivalent to shocks in *any* other period, and hence also the mean of those); this has been empirically verified

Definition of elasticities:

- "dust settling period": sum of difference of log-level sales on a dataset with shocked mmix instruments, and baseline log-level sales
- "long-term elasticity: difference of log-level sales on a dataset with shocked mmix instruments, and baseline log-level sales in one period (e.g., 12 months after shock)

Measures:

1. elast1: short-term elasticities (difference of log level sales w/ shocked mmix, and baseline log level sales)
2. elast6: sum of (1) over 6 months
3. elast12: sum of (1) over 12 months
4. elast12lt: difference in log-level sales 12 months after shock

Variables:

a. Price (ln rwpspr)
b. Distribution (ln wpswdst)
c. Line length (ln llen)

Descriptive statistics

Overview includes weighted mean elasticities, and an assessment about significance (percentage positive/negative & significant, percentage not significant).

varname	variable	N	mean	median	weightedmean	min	max	perc_positive	perc_negative	perc_ns
lnrwpspr	elast1	1687	-0.609	-0.544	-0.509	-6.383	5.947	0.057	0.386	0.557
lnrwpspr	elast12	1687	-0.790	-0.594	-0.601	-82.376	39.473	0.070	0.258	0.672
lnrwpspr	elast6	1687	-0.739	-0.576	-0.588	-16.762	25.405	0.071	0.281	0.648
lnrwpspr	elastlt12	1687	-0.010	0.000	0.000	-20.247	2.473	0.023	0.016	0.961
lnwpswdst	elast1	1687	0.635	0.551	0.540	-0.934	5.697	0.877	0.002	0.121
lnwpswdst	elast12	1687	1.061	0.813	0.782	-13.564	24.118	0.602	0.010	0.388
lnwpswdst	elast6	1687	0.924	0.741	0.750	-6.692	11.598	0.654	0.007	0.339
lnwpswdst	elastlt12	1687	0.017	0.000	0.000	-1.145	2.419	0.047	0.017	0.937
lnllen	elast1	1686	0.395	0.337	0.360	-0.767	2.352	0.601	0.005	0.394
lnllen	elast12	1686	1.021	0.787	0.828	-67.388	20.708	0.497	0.012	0.491
lnllen	elast6	1686	0.860	0.675	0.763	-12.135	11.432	0.540	0.009	0.451
lnllen	elastlt12	1686	0.016	0.001	0.000	-17.103	2.548	0.047	0.010	0.942

Descriptive stats by model type

Models in levels

varname	variable	N	mean	median	weightedmean	min	max	perc_positive	perc_negative	perc_ns
lnrwpspr	elast1	857	-0.619	-0.512	-0.490	-6.383	5.947	0.060	0.399	0.541
lnrwpspr	elast12	857	-1.298	-0.941	-0.878	-22.569	39.473	0.051	0.327	0.622
lnrwpspr	elast6	857	-1.119	-0.902	-0.851	-13.770	25.405	0.056	0.345	0.599
lnrwpspr	elastlt12	857	-0.022	0.000	0.000	-2.442	2.072	0.006	0.007	0.987
lnwpswdst	elast1	857	0.627	0.524	0.517	-0.401	5.697	0.868	0.001	0.131
lnwpswdst	elast12	857	1.468	0.910	0.837	-5.850	24.118	0.716	0.002	0.281
lnwpswdst	elast6	857	1.199	0.874	0.827	-2.925	11.598	0.749	0.004	0.247
lnwpswdst	elastlt12	857	0.036	0.001	0.000	-0.419	2.419	0.046	0.000	0.954
lnllen	elast1	856	0.377	0.316	0.342	-0.523	2.352	0.599	0.008	0.393
lnllen	elast12	856	1.366	0.797	0.837	-2.245	20.708	0.568	0.007	0.425
lnllen	elast6	856	1.064	0.761	0.803	-1.702	11.432	0.592	0.007	0.401
lnllen	elastlt12	856	0.040	0.001	0.000	-0.263	2.548	0.053	0.000	0.947

Models in differences

varname	variable	N	mean	median	weightedmean	min	max	perc_positive	perc_negative	perc_ns
lnrwpspr	elast1	397	-0.613	-0.562	-0.530	-3.676	3.089	0.063	0.363	0.574
lnrwpspr	elast12	397	-0.004	0.095	0.014	-22.996	25.202	0.060	0.065	0.874
lnrwpspr	elast6	397	-0.269	-0.223	-0.242	-11.091	10.366	0.053	0.098	0.849
lnrwpspr	elastlt12	397	0.044	0.054	0.043	-1.980	2.473	0.083	0.053	0.864
lnwpswdst	elast1	397	0.587	0.533	0.502	-0.934	4.258	0.861	0.008	0.131
lnwpswdst	elast12	397	0.499	0.535	0.498	-13.564	9.106	0.179	0.035	0.786
lnwpswdst	elast6	397	0.510	0.471	0.479	-6.692	5.833	0.297	0.018	0.685
lnwpswdst	elastlt12	397	-0.002	0.007	0.003	-1.145	0.813	0.091	0.071	0.839
lnllen	elast1	397	0.356	0.279	0.317	-0.767	1.908	0.491	0.000	0.509
lnllen	elast12	397	0.527	0.469	0.490	-11.048	8.159	0.101	0.028	0.872
lnllen	elast6	397	0.433	0.349	0.393	-5.441	4.587	0.191	0.013	0.796
lnllen	elastlt12	397	0.015	0.021	0.016	-0.932	0.688	0.065	0.043	0.892

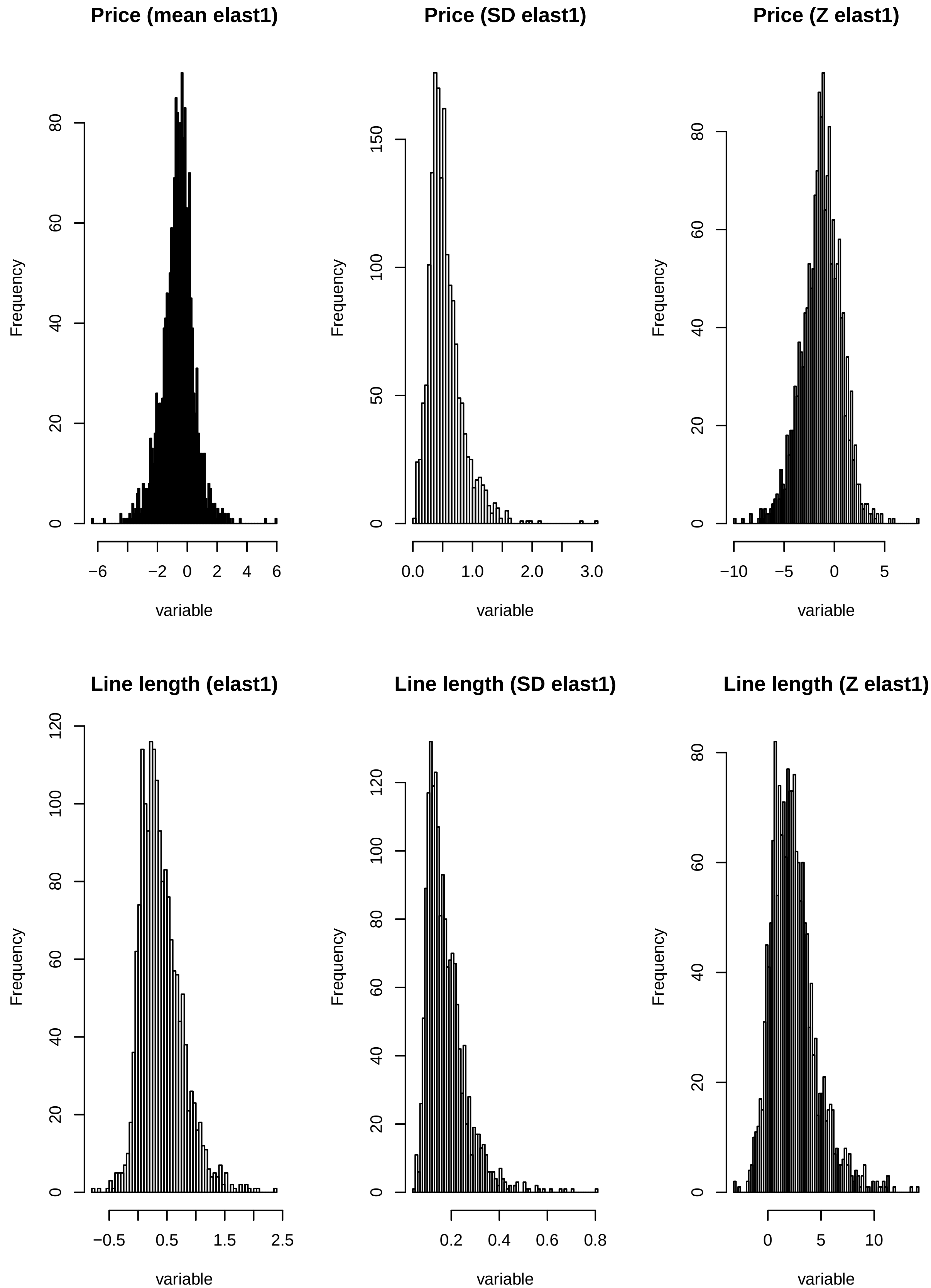
Models in EC

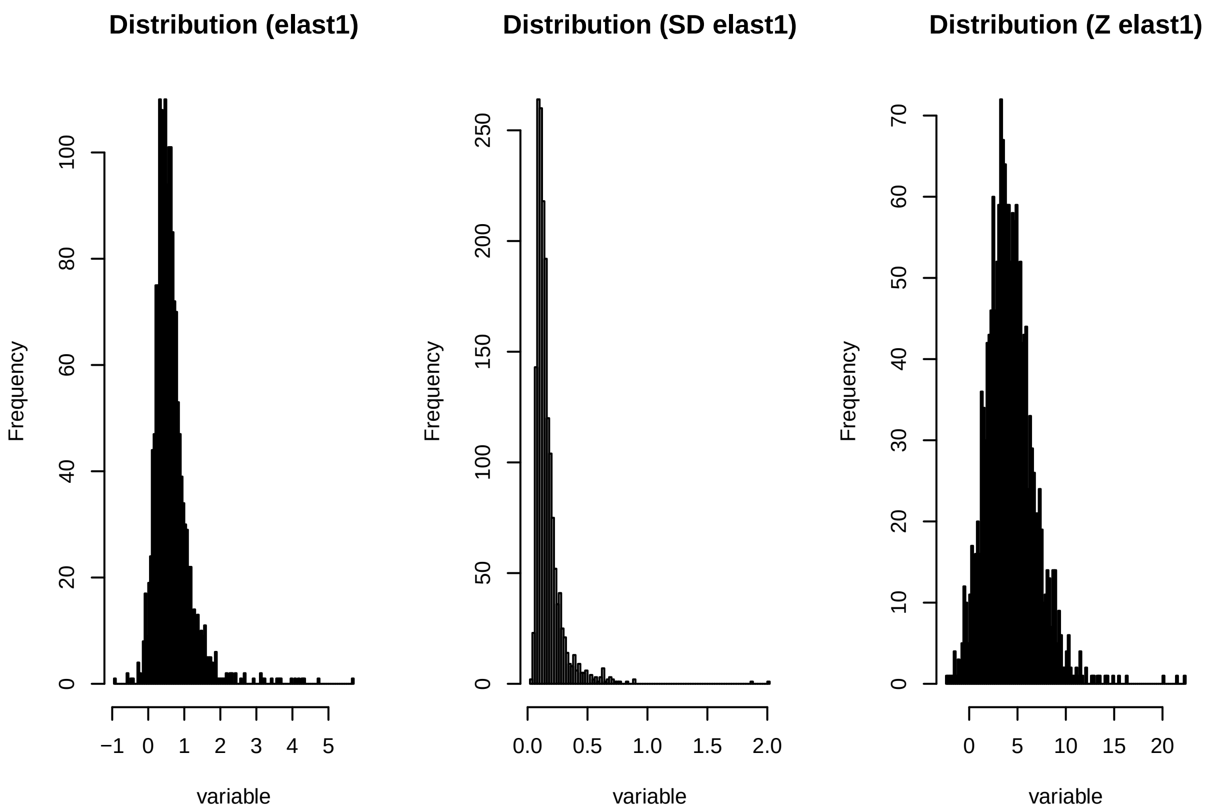
varname	variable	N	mean	median	weightedmean	min	max	perc_positive	perc_negative	perc_ns
lnrwpspr	elast1	433	-0.586	-0.577	-0.531	-3.667	2.735	0.048	0.381	0.570
lnrwpspr	elast12	433	-0.505	-0.384	-0.402	-82.376	14.994	0.115	0.298	0.587
lnrwpspr	elast6	433	-0.419	-0.401	-0.403	-16.762	6.145	0.115	0.321	0.564
lnrwpspr	elastlt12	433	-0.036	0.000	0.000	-20.247	1.783	0.002	0.000	0.998
lnwpswdst	elast1	433	0.694	0.624	0.616	-0.117	4.717	0.908	0.000	0.092
lnwpswdst	elast12	433	0.771	0.758	0.765	-5.787	6.443	0.762	0.002	0.236
lnwpswdst	elast6	433	0.760	0.724	0.745	-2.418	4.512	0.794	0.002	0.203
lnwpswdst	elastlt12	433	-0.003	0.000	0.000	-0.799	0.258	0.009	0.000	0.991
lnllen	elast1	433	0.467	0.420	0.437	-0.660	1.798	0.707	0.002	0.291
lnllen	elast12	433	0.793	0.901	0.885	-67.388	7.973	0.721	0.009	0.270
lnllen	elast6	433	0.848	0.839	0.842	-12.135	4.334	0.755	0.009	0.236
lnllen	elastlt12	433	-0.032	0.001	0.000	-17.103	0.839	0.021	0.000	0.979

Plots

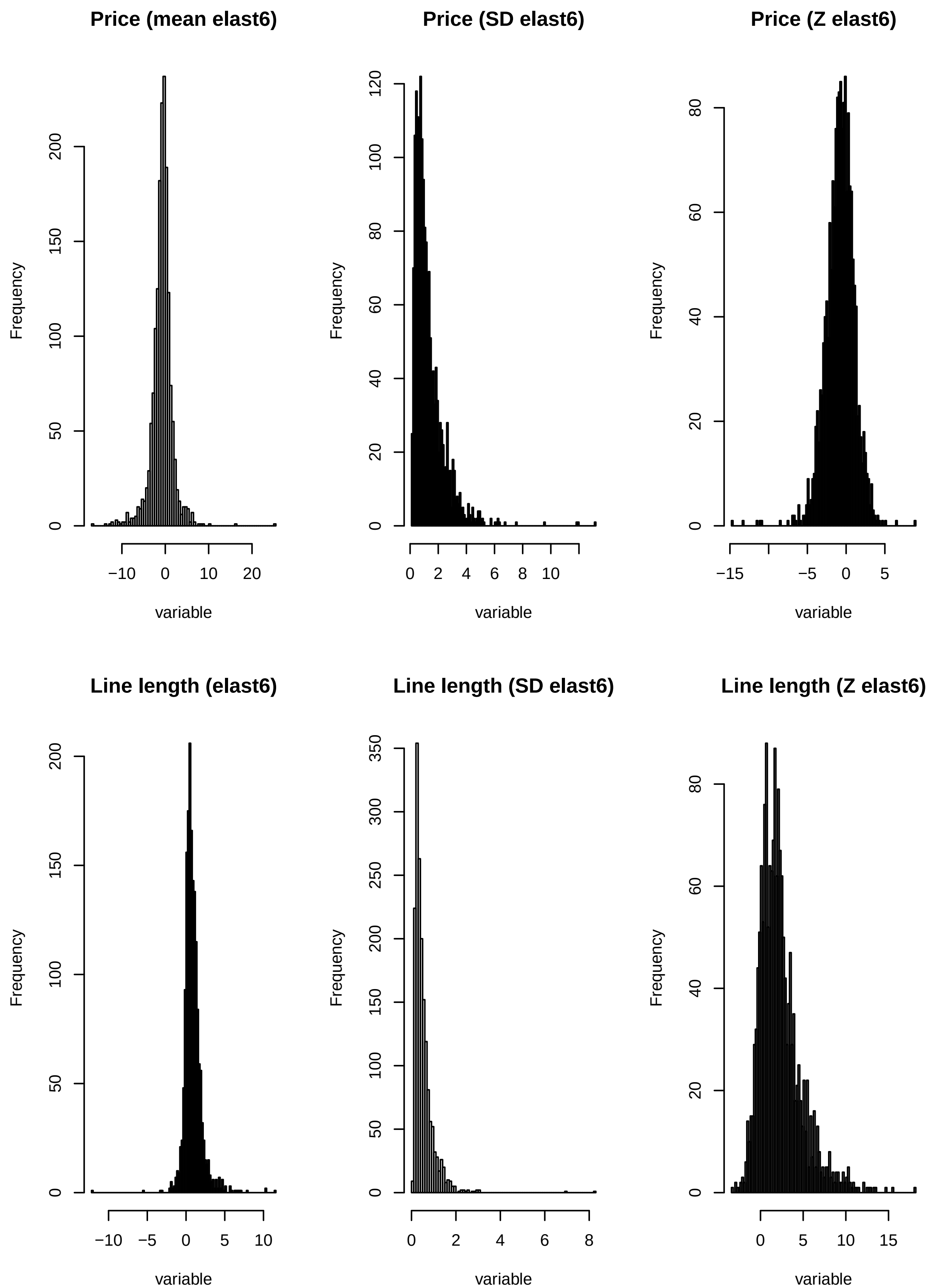
- Distribution of mean parameter
- Distribution of standard errors
- Distribution of z values

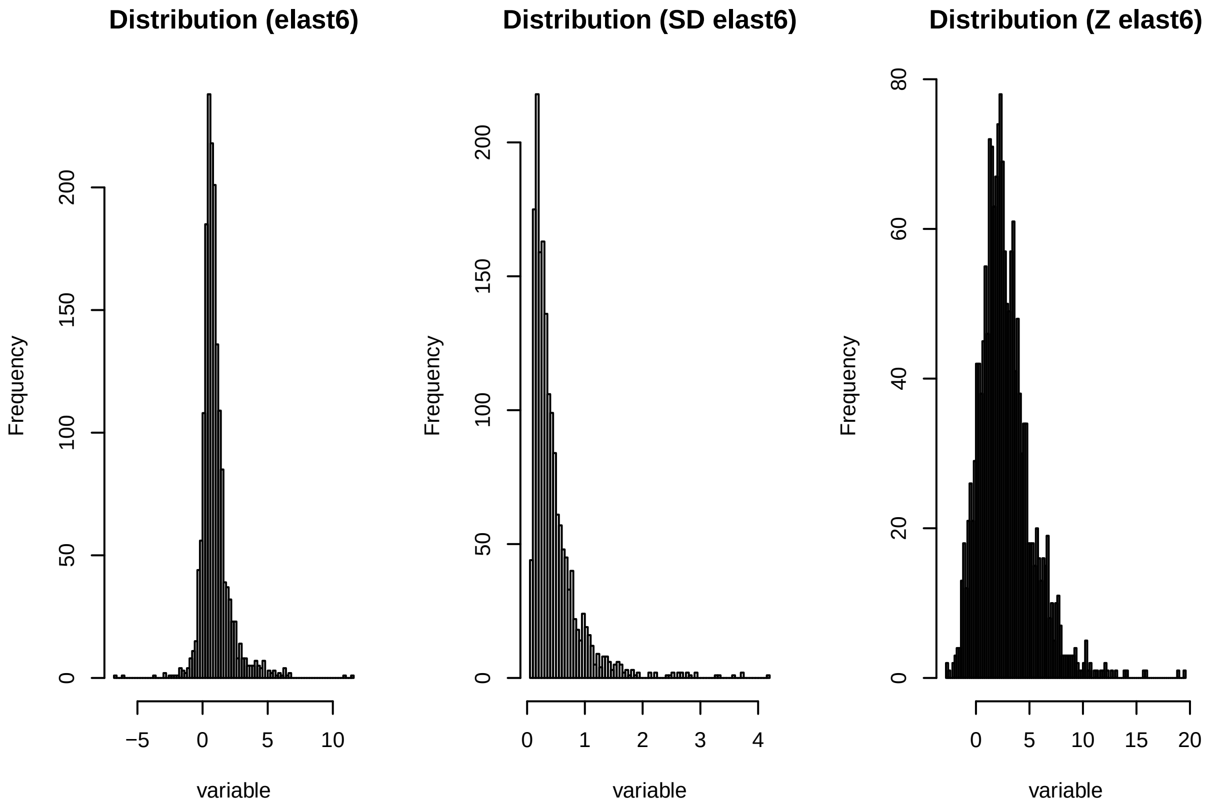
Short-term (elast1)



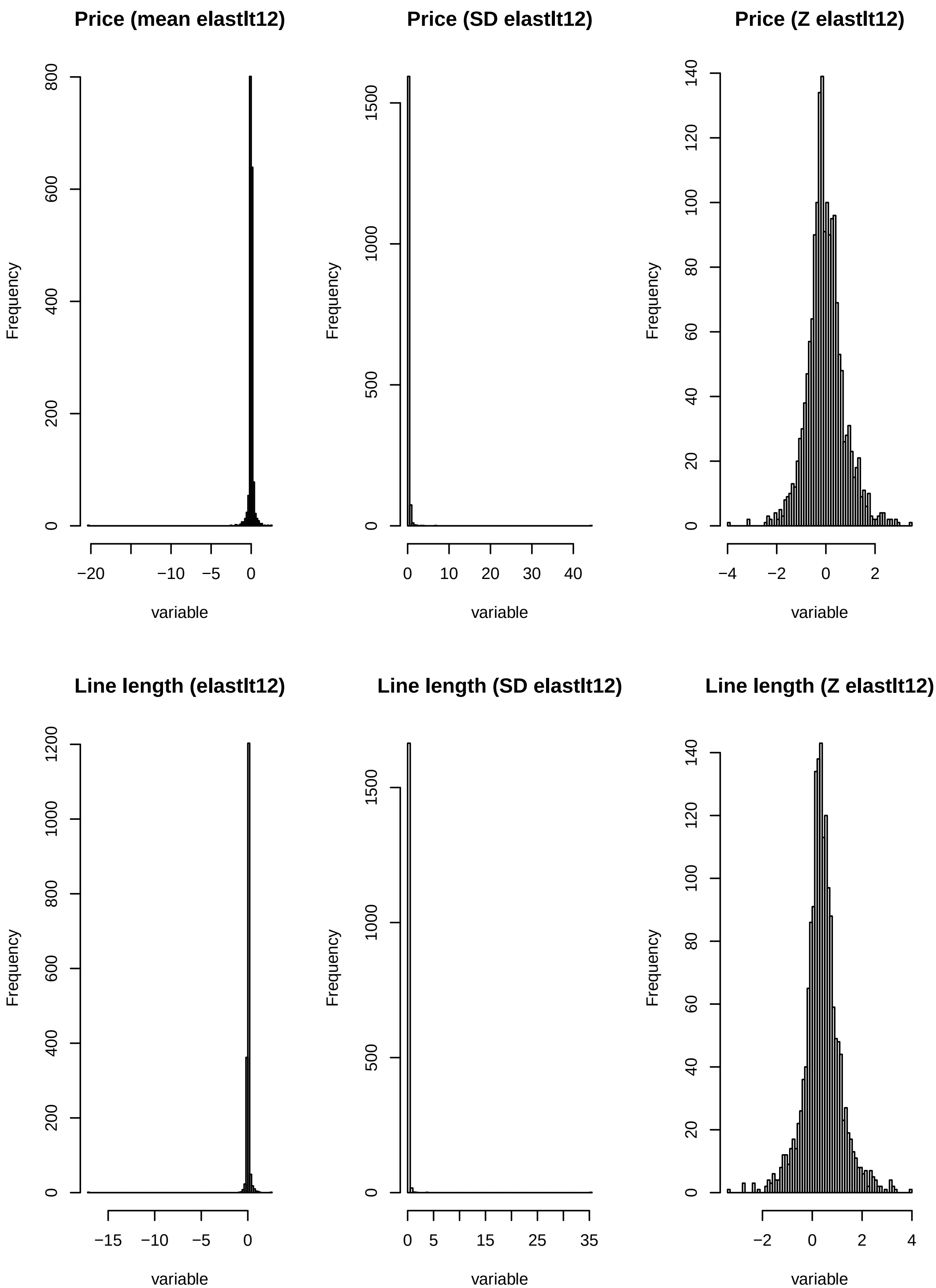

Distribution (elast1)
Frequency
variable
Distribution (SD elast1)
Frequency
variable
Distribution (Z elast1)
Frequency
variable

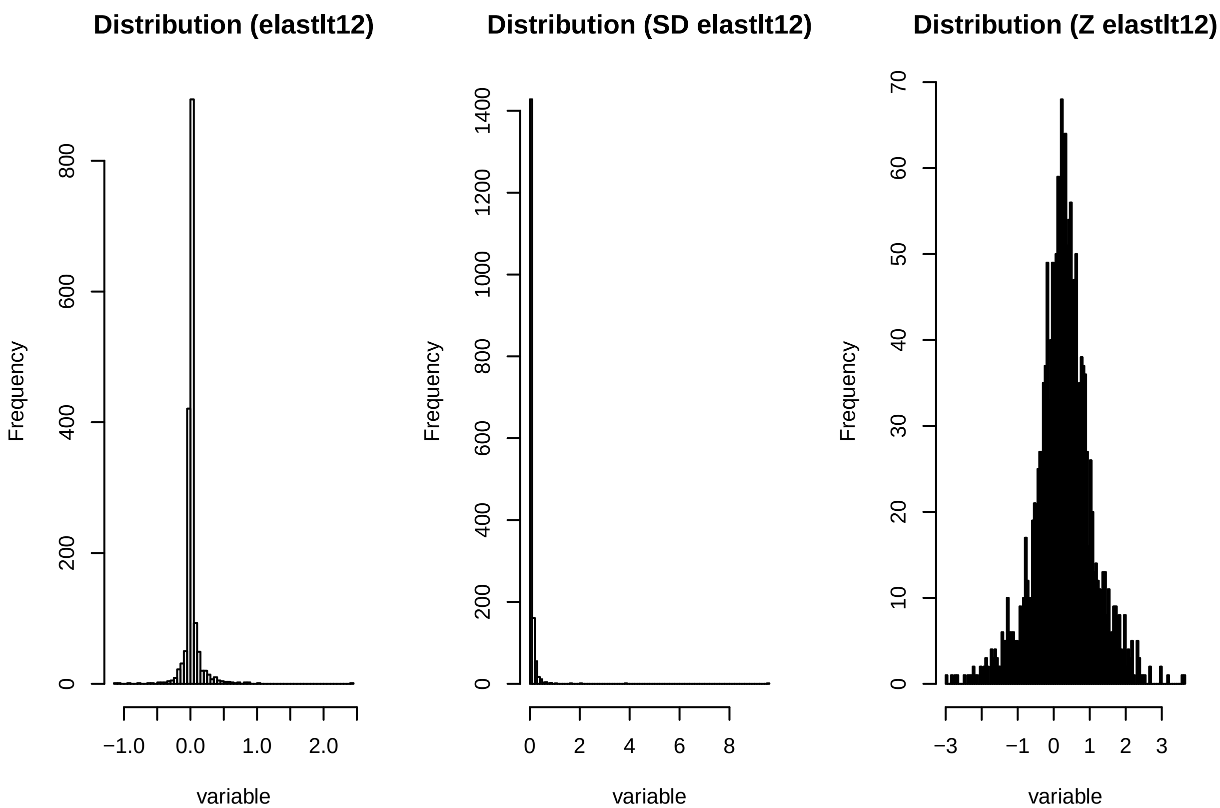
Dust-settling (6 months) (elast6)




Distribution (elast6)
Distribution (SD elast6)
Distribution (Z elast6)
Frequency
variable

Long-term (12 months) (elast12lt)




Distribution (elastlt12)
Frequency
0
200
400
600
800
−1.0
0.0
1.0
2.0
variable
Distribution (SD elastlt12)
Frequency
0
200
400
600
800
1000
1200
1400
0
2
4
6
8
variable
Distribution (Z elastlt12)
Frequency
0
10
20
30
40
50
60
70
−3
−1
0
1
2
3
variable