Inspection of new elasticities (with standard errors, max 3 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	-0.550	-0.516	-6.383	5.696	0.061	0.388	0.551
lnrwpspr	elast12	1687	-0.766	-0.612	-0.605	-82.376	97.621	0.070	0.251	0.679
lnrwpspr	elast6	1687	-0.732	-0.583	-0.587	-16.762	39.095	0.069	0.280	0.651
lnrwpspr	elastlt12	1687	-0.005	0.000	0.000	-20.247	13.145	0.027	0.022	0.951
lnwpswdst	elast1	1687	0.639	0.551	0.541	-0.934	5.697	0.875	0.002	0.123
lnwpswdst	elast12	1687	1.133	0.817	0.796	-13.564	16.284	0.596	0.011	0.394
lnwpswdst	elast6	1687	0.953	0.735	0.758	-6.692	11.598	0.660	0.008	0.332
lnwpswdst	elastlt12	1687	0.023	0.001	0.000	-1.145	1.476	0.063	0.018	0.919
lnllen	elast1	1686	0.390	0.332	0.356	-0.767	2.095	0.591	0.005	0.403
lnllen	elast12	1686	1.056	0.792	0.834	-67.388	18.388	0.486	0.014	0.500
lnllen	elast6	1686	0.866	0.680	0.759	-12.135	11.432	0.529	0.010	0.461
lnllen	elastlt12	1686	0.021	0.002	0.000	-17.103	1.876	0.063	0.014	0.923

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	-0.608	-0.504	-0.496	-6.383	5.696	0.065	0.394	0.540
lnrwpspr	elast12	857	-1.236	-0.990	-0.896	-22.569	97.621	0.050	0.321	0.629
lnrwpspr	elast6	857	-1.097	-0.942	-0.856	-13.217	39.095	0.054	0.345	0.601
lnrwpspr	elastlt12	857	-0.011	0.000	0.000	-2.442	13.145	0.009	0.019	0.972
lnwpswdst	elast1	857	0.636	0.531	0.521	-0.401	5.697	0.863	0.001	0.135
lnwpswdst	elast12	857	1.616	0.966	0.867	-5.850	16.284	0.704	0.002	0.294
lnwpswdst	elast6	857	1.261	0.880	0.849	-2.925	11.598	0.744	0.004	0.252
lnwpswdst	elastlt12	857	0.048	0.001	0.000	-0.856	1.476	0.070	0.000	0.930
lnllen	elast1	856	0.371	0.311	0.337	-0.523	2.095	0.578	0.007	0.415
lnllen	elast12	856	1.458	0.856	0.860	-2.245	18.388	0.547	0.007	0.446
lnllen	elast6	856	1.087	0.767	0.810	-1.969	11.432	0.574	0.006	0.421
lnllen	elastlt12	856	0.052	0.002	0.000	-0.263	1.876	0.075	0.000	0.925

Models in differences

varname	variable	N	mean	median	weightedmean	min	max	perc_positive	perc_negative	perc_ns
lnrwpspr	elast1	394	-0.624	-0.583	-0.539	-3.727	3.012	0.061	0.371	0.569
lnrwpspr	elast12	394	-0.066	-0.066	-0.028	-22.996	15.906	0.071	0.069	0.860
lnrwpspr	elast6	394	-0.288	-0.251	-0.249	-11.091	8.375	0.056	0.102	0.843
lnrwpspr	elastlt12	394	0.038	0.048	0.038	-1.980	1.350	0.086	0.051	0.863
lnwpswdst	elast1	394	0.577	0.525	0.500	-0.934	4.258	0.858	0.008	0.135
lnwpswdst	elast12	394	0.477	0.505	0.497	-13.564	8.858	0.203	0.038	0.759
lnwpswdst	elast6	394	0.493	0.474	0.478	-6.692	5.632	0.335	0.025	0.640
lnwpswdst	elastlt12	394	-0.003	0.005	0.003	-1.145	0.813	0.102	0.076	0.822
lnllen	elast1	394	0.357	0.287	0.316	-0.767	1.908	0.500	0.003	0.497
lnllen	elast12	394	0.520	0.372	0.477	-11.048	8.159	0.124	0.030	0.845
lnllen	elast6	394	0.442	0.320	0.398	-5.441	4.587	0.206	0.018	0.777
lnllen	elastlt12	394	0.012	0.014	0.013	-1.019	0.688	0.076	0.058	0.865

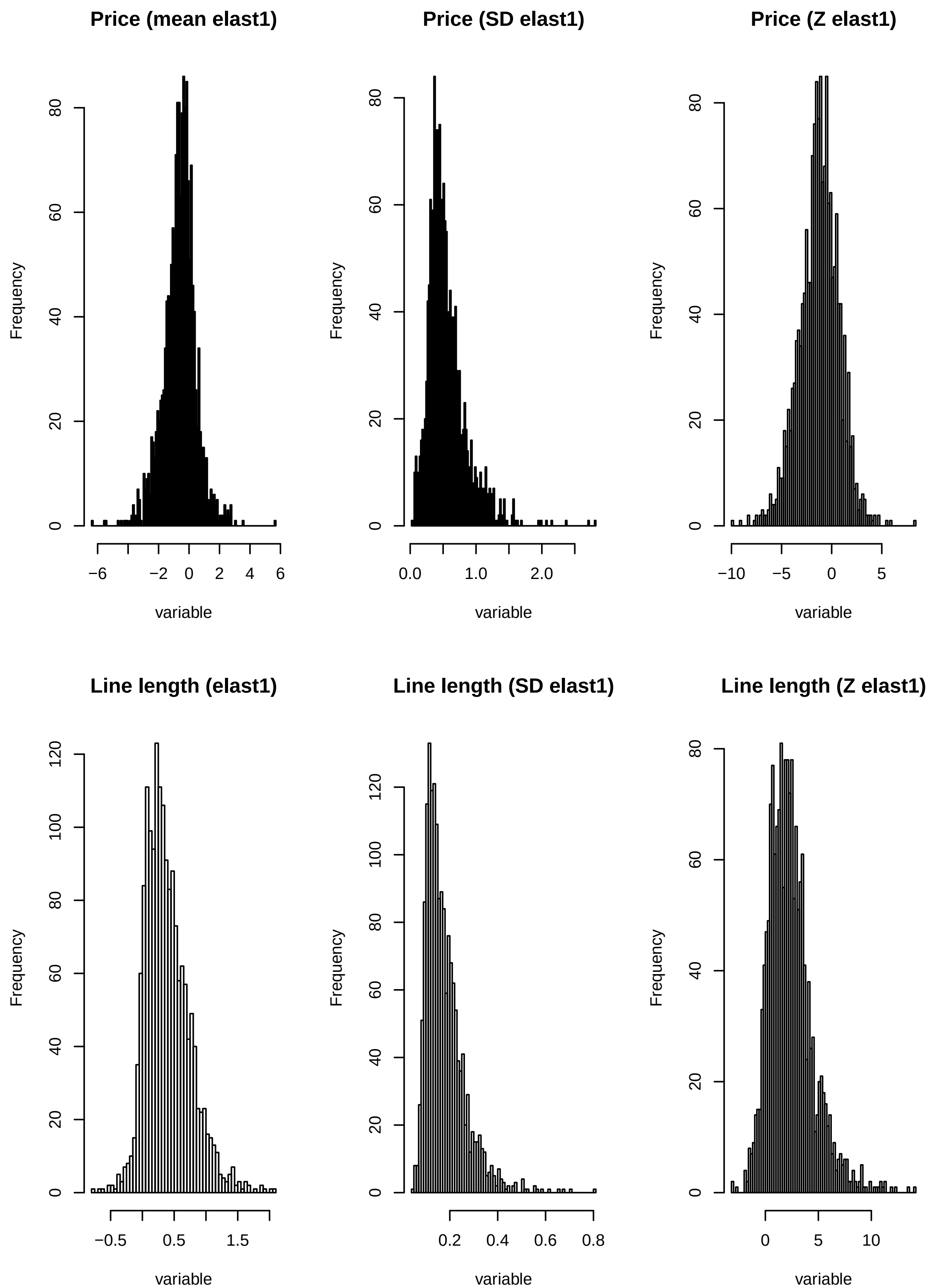
Models in EC

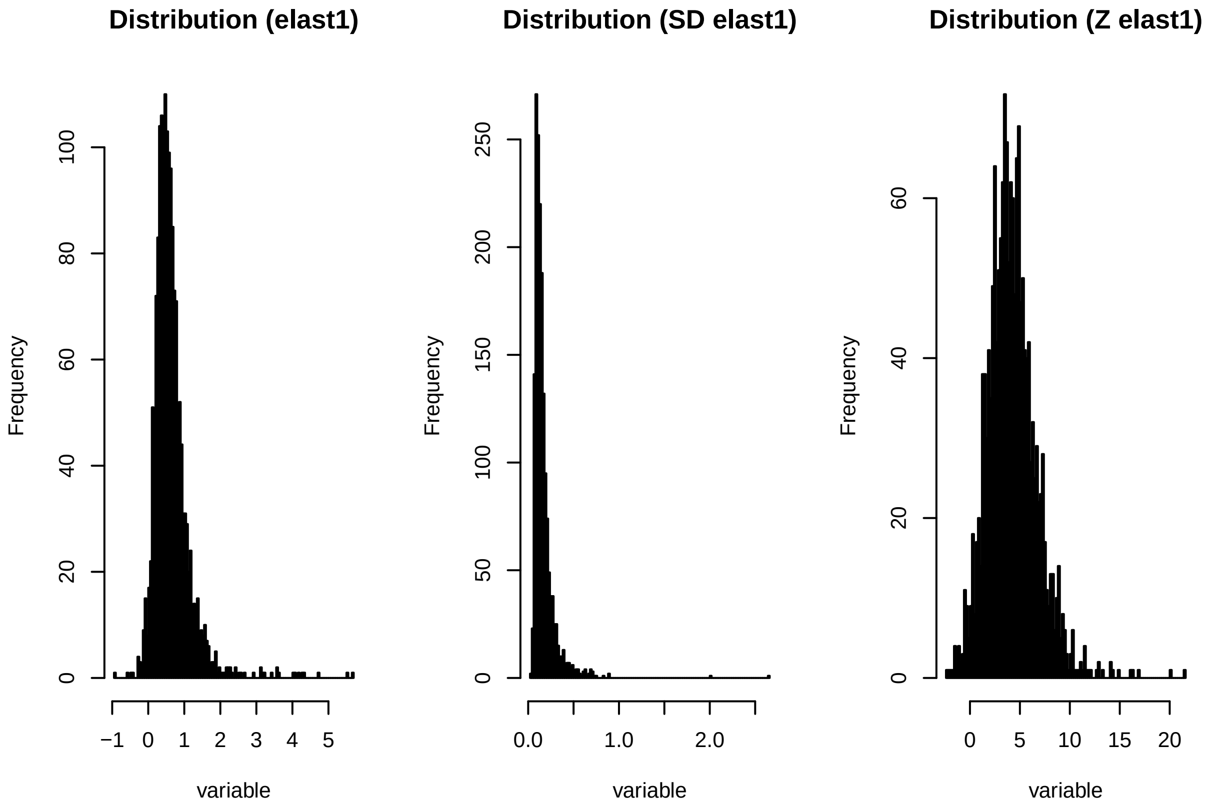
varname	variable	N	mean	median	weightedmean	min	max	perc_positive	perc_negative	perc_ns
lnrwpspr	elast1	436	-0.597	-0.576	-0.538	-3.667	2.737	0.053	0.392	0.555
lnrwpspr	elast12	436	-0.476	-0.374	-0.398	-82.376	27.954	0.108	0.280	0.612
lnrwpspr	elast6	436	-0.415	-0.399	-0.403	-16.762	10.550	0.110	0.312	0.578
lnrwpspr	elastlt12	436	-0.032	0.000	0.000	-20.247	3.229	0.007	0.002	0.991
lnwpswdst	elast1	436	0.702	0.624	0.615	-0.229	4.717	0.913	0.000	0.087
lnwpswdst	elast12	436	0.776	0.759	0.767	-6.034	5.125	0.739	0.002	0.259
lnwpswdst	elast6	436	0.765	0.725	0.744	-2.418	3.293	0.787	0.002	0.211
lnwpswdst	elastlt12	436	-0.004	0.000	0.000	-0.799	0.289	0.016	0.000	0.984
lnllen	elast1	436	0.458	0.413	0.430	-0.660	1.557	0.700	0.005	0.296
lnllen	elast12	436	0.749	0.889	0.874	-67.388	5.863	0.695	0.011	0.294
lnllen	elast6	436	0.814	0.831	0.827	-12.135	4.232	0.734	0.011	0.255
lnllen	elastlt12	436	-0.034	0.001	0.000	-17.103	0.462	0.028	0.000	0.972

Plots

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

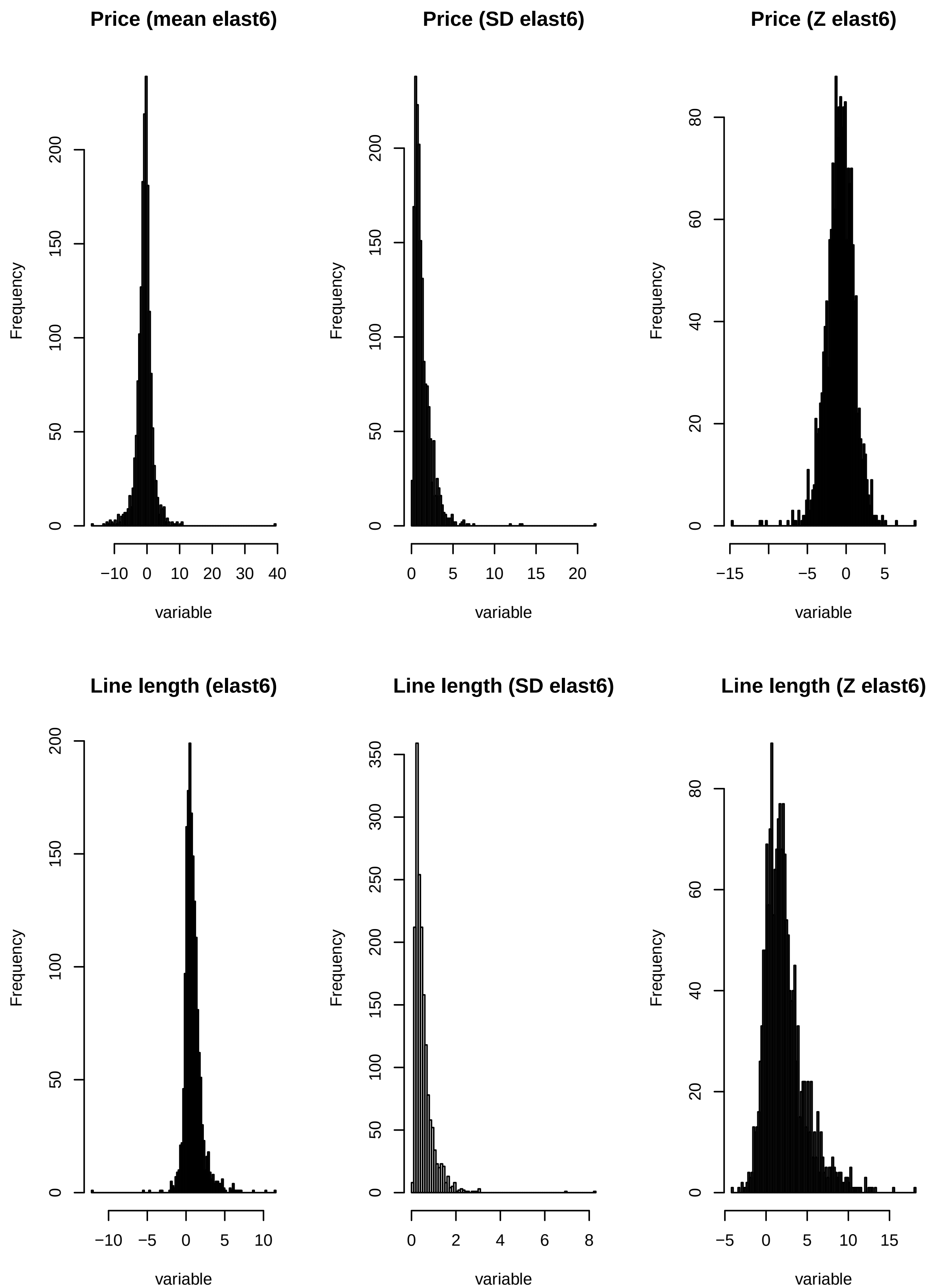
Short-term (elast1)

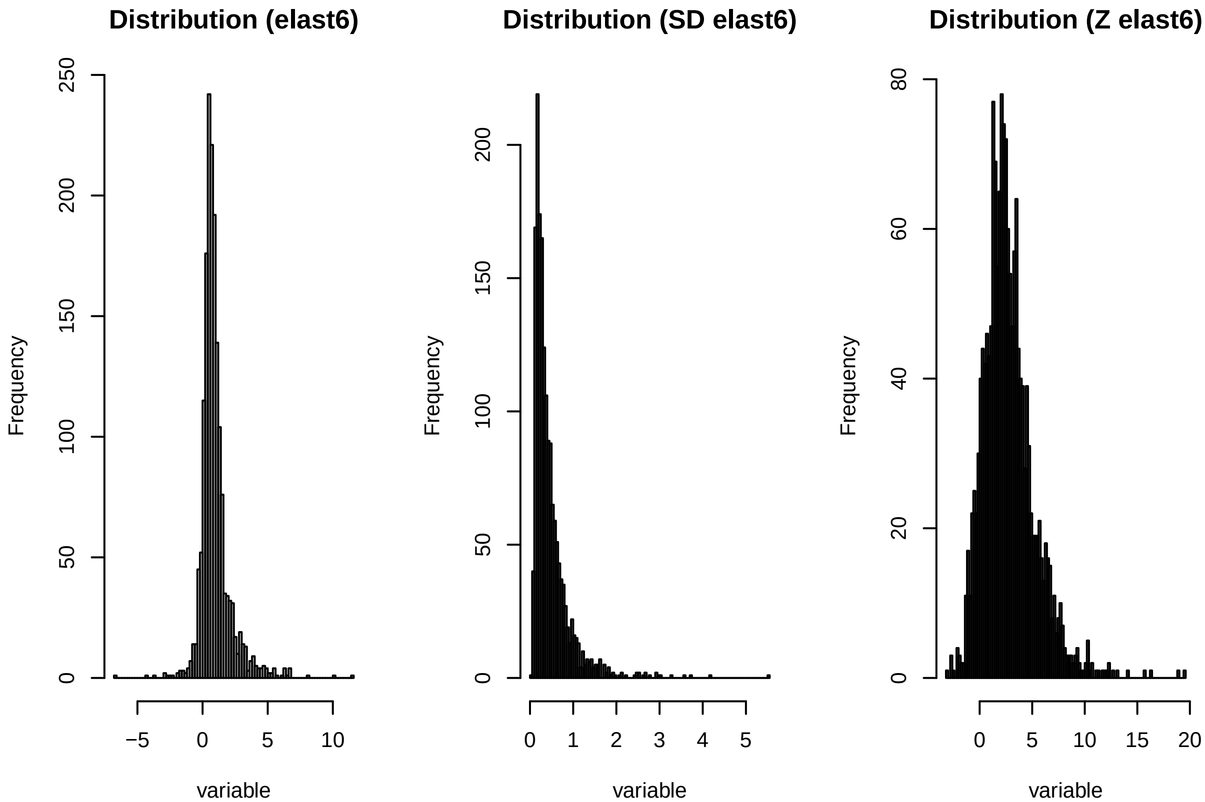




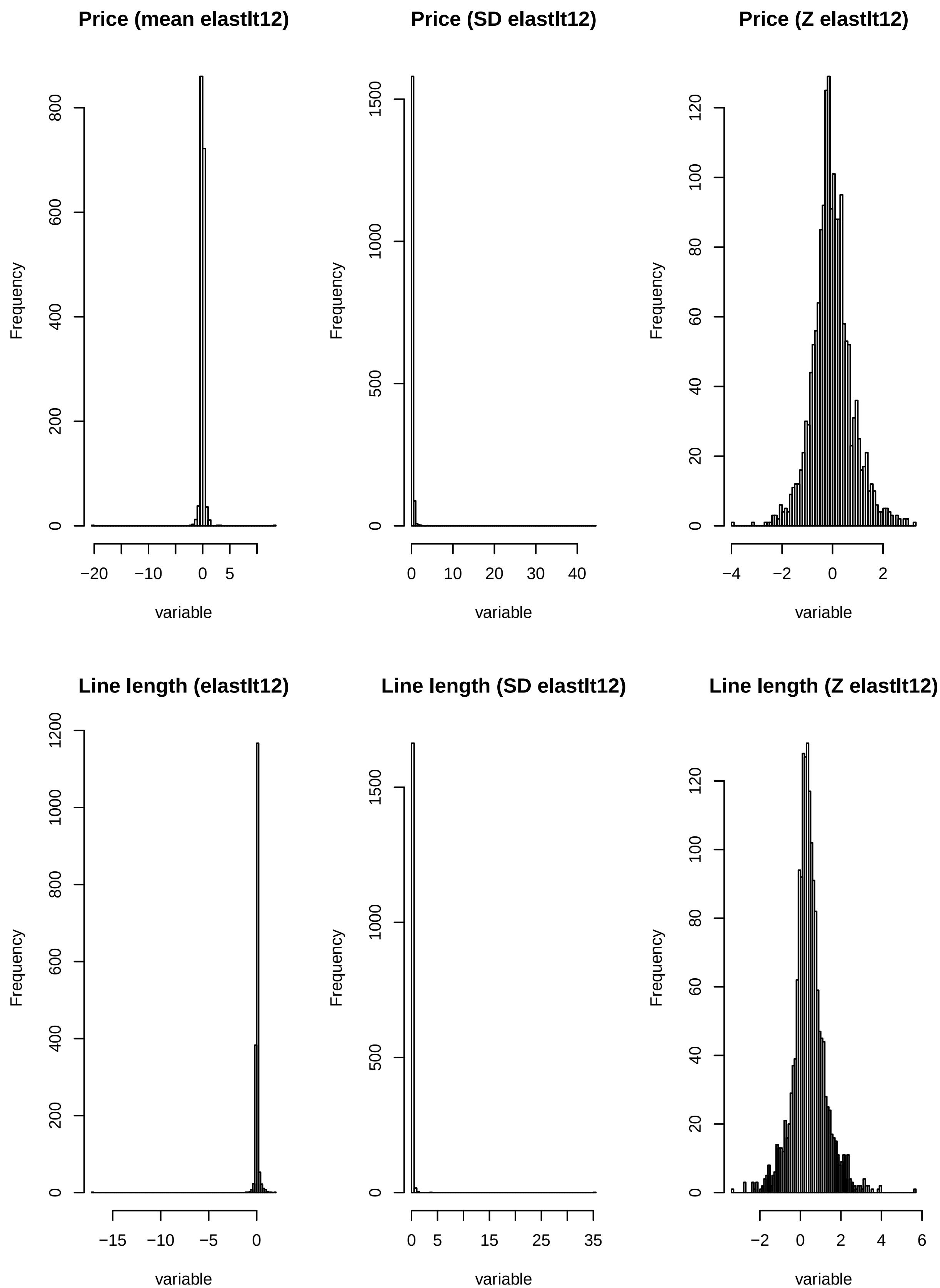
Distribution (elast1)
Frequency
0
20
40
60
80
100
−1
0
1
2
3
4
5
variable
Distribution (SD elast1)
Frequency
0
50
100
150
200
250
0.0
1.0
2.0
variable
Distribution (Z elast1)
Frequency
0
20
40
60
0
5
10
15
20
variable

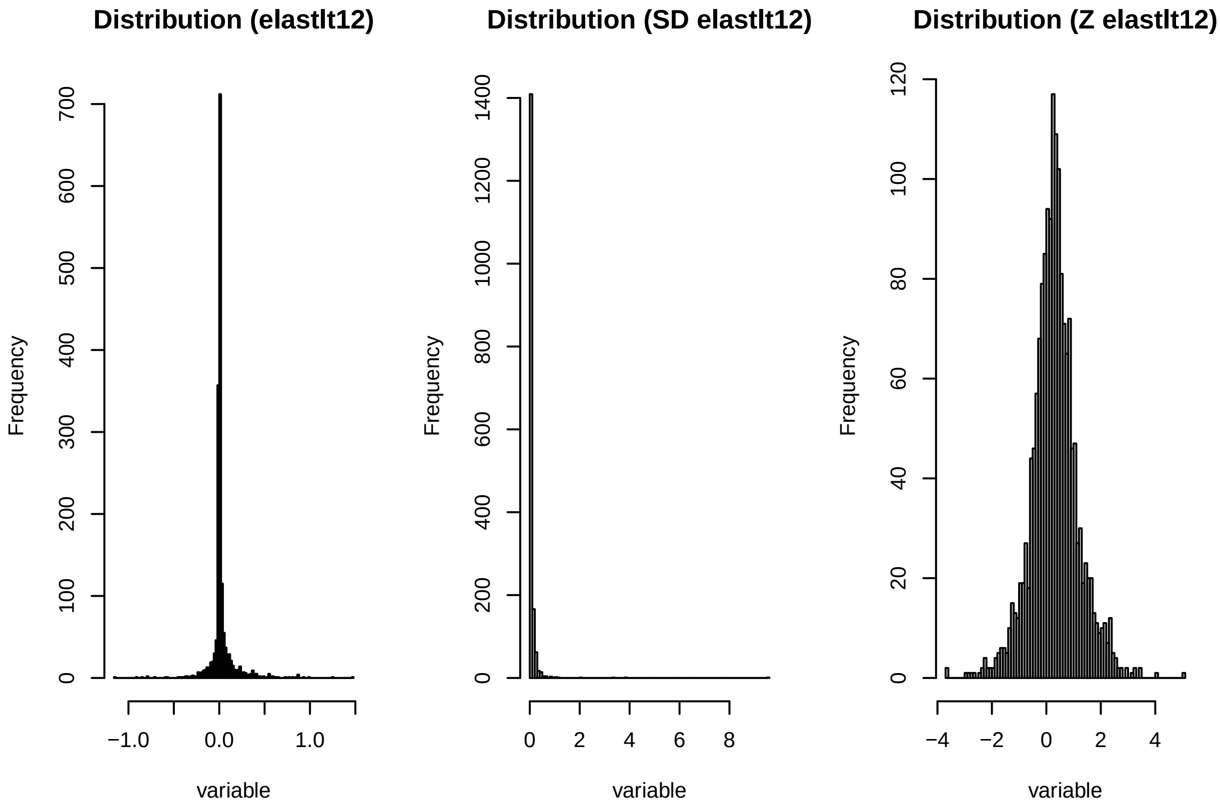
Dust-settling (6 months) (elast6)




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

Long-term (12 months) (elast12lt)





Distribution (elastlt12)
Frequency
0
100
200
300
400
500
600
700
−1.0
0.0
1.0
variable
Distribution (SD elastlt12)
Frequency
0
200
400
600
800
1000
1200
1400
0
2
4
6
8
variable
Distribution (Z elastlt12)
Frequency
0
20
40
60
80
100
120
−4
−2
0
2
4
variable