Inspection of new elasticities (with standard errors, max 12 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	-0.611	-0.561	-0.527	-6.383	5.696	0.062	0.397	0.541
lnrwpspr	elast12	1687	-0.941	-0.702	-0.631	-82.376	97.621	0.068	0.248	0.683
lnrwpspr	elast6	1687	-0.796	-0.612	-0.599	-16.921	39.095	0.066	0.285	0.649
lnrwpspr	elastlt12	1687	-0.022	0.000	0.000	-20.247	13.145	0.029	0.035	0.936
lnwpswdst	elast1	1687	0.650	0.564	0.549	-0.934	5.723	0.879	0.002	0.119
lnwpswdst	elast12	1687	1.246	0.834	0.822	-37.347	16.284	0.587	0.014	0.398
lnwpswdst	elast6	1687	0.992	0.744	0.762	-10.448	11.598	0.654	0.011	0.335
lnwpswdst	elastlt12	1687	0.033	0.002	0.000	-6.078	1.854	0.085	0.018	0.896
lnllen	elast1	1686	0.382	0.333	0.350	-0.767	2.152	0.591	0.007	0.403
lnllen	elast12	1686	1.080	0.800	0.837	-67.388	21.586	0.477	0.015	0.508
lnllen	elast6	1686	0.867	0.681	0.741	-12.135	8.655	0.523	0.012	0.465
lnllen	elastlt12	1686	0.024	0.003	0.000	-17.103	3.006	0.084	0.014	0.902

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	-0.527	-0.516	-6.383	5.696	0.062	0.406	0.532
lnrwpspr	elast12	857	-1.584	-1.110	-0.959	-33.079	97.621	0.049	0.314	0.637
lnrwpspr	elast6	857	-1.239	-1.023	-0.901	-16.921	39.095	0.051	0.351	0.597
lnrwpspr	elastlt12	857	-0.049	-0.001	0.000	-3.368	13.145	0.008	0.041	0.951
lnwpswdst	elast1	857	0.651	0.558	0.538	-0.401	5.723	0.874	0.002	0.124
lnwpswdst	elast12	857	1.766	0.994	0.913	-37.347	16.284	0.686	0.008	0.306
lnwpswdst	elast6	857	1.312	0.862	0.873	-10.448	11.598	0.743	0.007	0.250
lnwpswdst	elastlt12	857	0.062	0.003	0.000	-6.078	1.854	0.104	0.001	0.895
lnllen	elast1	856	0.362	0.311	0.331	-0.523	2.152	0.581	0.009	0.410
lnllen	elast12	856	1.559	0.901	0.874	-4.473	21.586	0.532	0.011	0.458
lnllen	elast6	856	1.120	0.777	0.799	-2.518	8.655	0.571	0.011	0.418
lnllen	elastlt12	856	0.064	0.004	0.000	-0.292	3.006	0.104	0.001	0.895

Models in differences

varname	variable	N	mean	median	weightedmean	min	max	perc_positive	perc_negative	perc_ns
lnrwpspr	elast1	413	-0.583	-0.571	-0.534	-5.771	3.012	0.073	0.373	0.554
lnrwpspr	elast12	413	0.141	0.075	-0.020	-20.849	32.416	0.070	0.073	0.857
lnrwpspr	elast6	413	-0.165	-0.207	-0.211	-10.179	12.686	0.061	0.102	0.838
lnrwpspr	elastlt12	413	0.052	0.046	0.035	-1.778	3.901	0.085	0.046	0.869
lnwpswdst	elast1	413	0.652	0.545	0.517	-0.934	5.691	0.860	0.005	0.136
lnwpswdst	elast12	413	0.655	0.542	0.560	-20.130	12.532	0.237	0.041	0.722
lnwpswdst	elast6	413	0.579	0.472	0.488	-8.373	7.836	0.349	0.027	0.625
lnwpswdst	elastlt12	413	0.011	0.011	0.012	-2.117	0.784	0.111	0.073	0.816
lnllen	elast1	413	0.351	0.296	0.309	-0.767	1.908	0.508	0.005	0.487
lnllen	elast12	413	0.384	0.356	0.397	-11.048	8.052	0.121	0.031	0.847
lnllen	elast6	413	0.363	0.300	0.348	-5.441	4.587	0.201	0.019	0.780
lnllen	elastlt12	413	0.002	0.011	0.009	-1.019	0.589	0.090	0.056	0.855

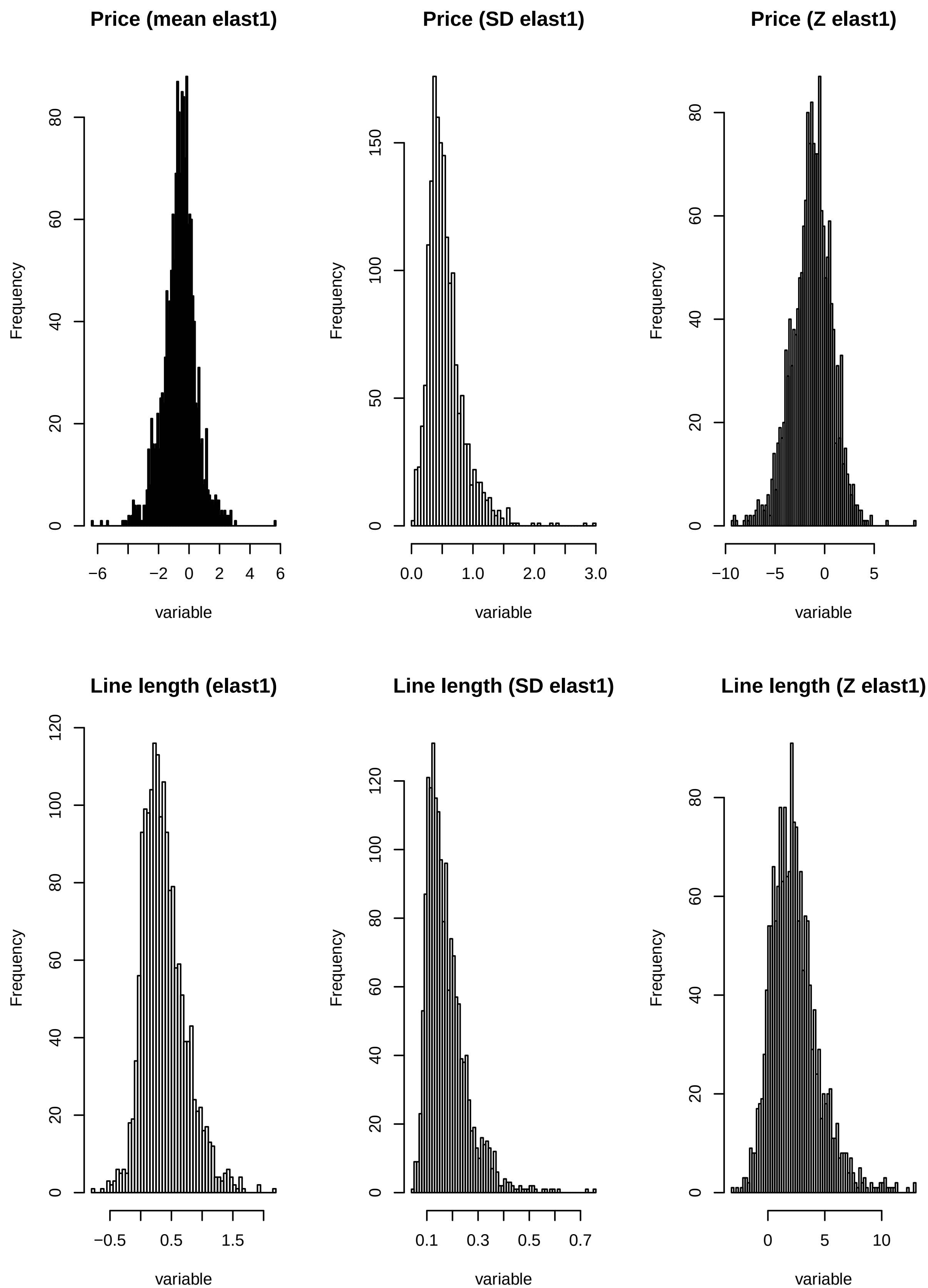
Models in EC

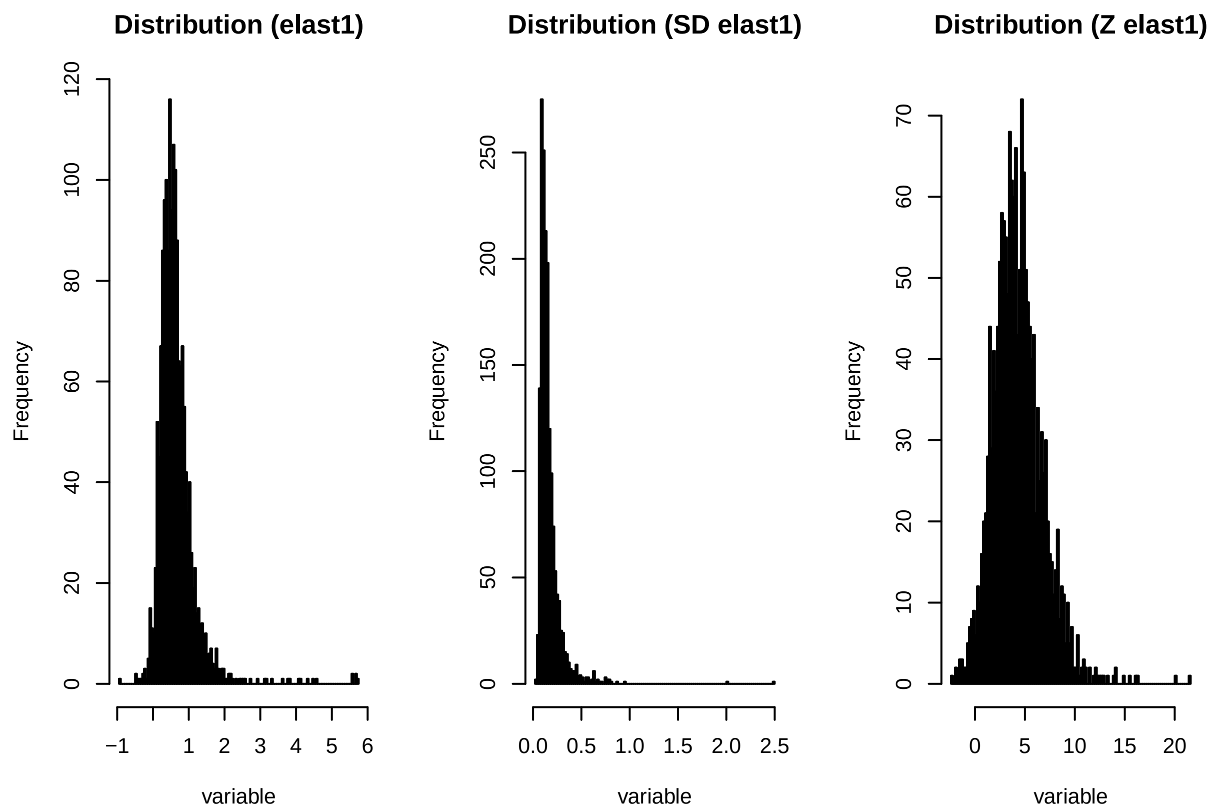
varname	variable	N	mean	median	weightedmean	min	max	perc_positive	perc_negative	perc_ns
lnrwpspr	elast1	417	-0.621	-0.591	-0.547	-3.305	2.737	0.053	0.400	0.547
lnrwpspr	elast12	417	-0.691	-0.409	-0.432	-82.376	9.800	0.106	0.288	0.607
lnrwpspr	elast6	417	-0.510	-0.413	-0.423	-16.762	4.506	0.103	0.329	0.568
lnrwpspr	elastlt12	417	-0.042	0.000	0.000	-20.247	0.993	0.017	0.012	0.971
lnwpswdst	elast1	417	0.648	0.599	0.601	-0.229	2.194	0.909	0.000	0.091
lnwpswdst	elast12	417	0.765	0.767	0.773	-5.787	5.125	0.731	0.000	0.269
lnwpswdst	elast6	417	0.744	0.726	0.738	-2.418	3.293	0.775	0.002	0.223
lnwpswdst	elastlt12	417	-0.003	0.001	0.000	-1.121	0.289	0.022	0.000	0.978
lnllen	elast1	417	0.453	0.407	0.429	-0.642	1.557	0.693	0.002	0.305
lnllen	elast12	417	0.785	0.895	0.904	-67.388	4.692	0.717	0.010	0.273
lnllen	elast6	417	0.846	0.843	0.839	-12.135	4.452	0.741	0.010	0.249
lnllen	elastlt12	417	-0.036	0.002	0.001	-17.103	0.342	0.036	0.000	0.964

Plots

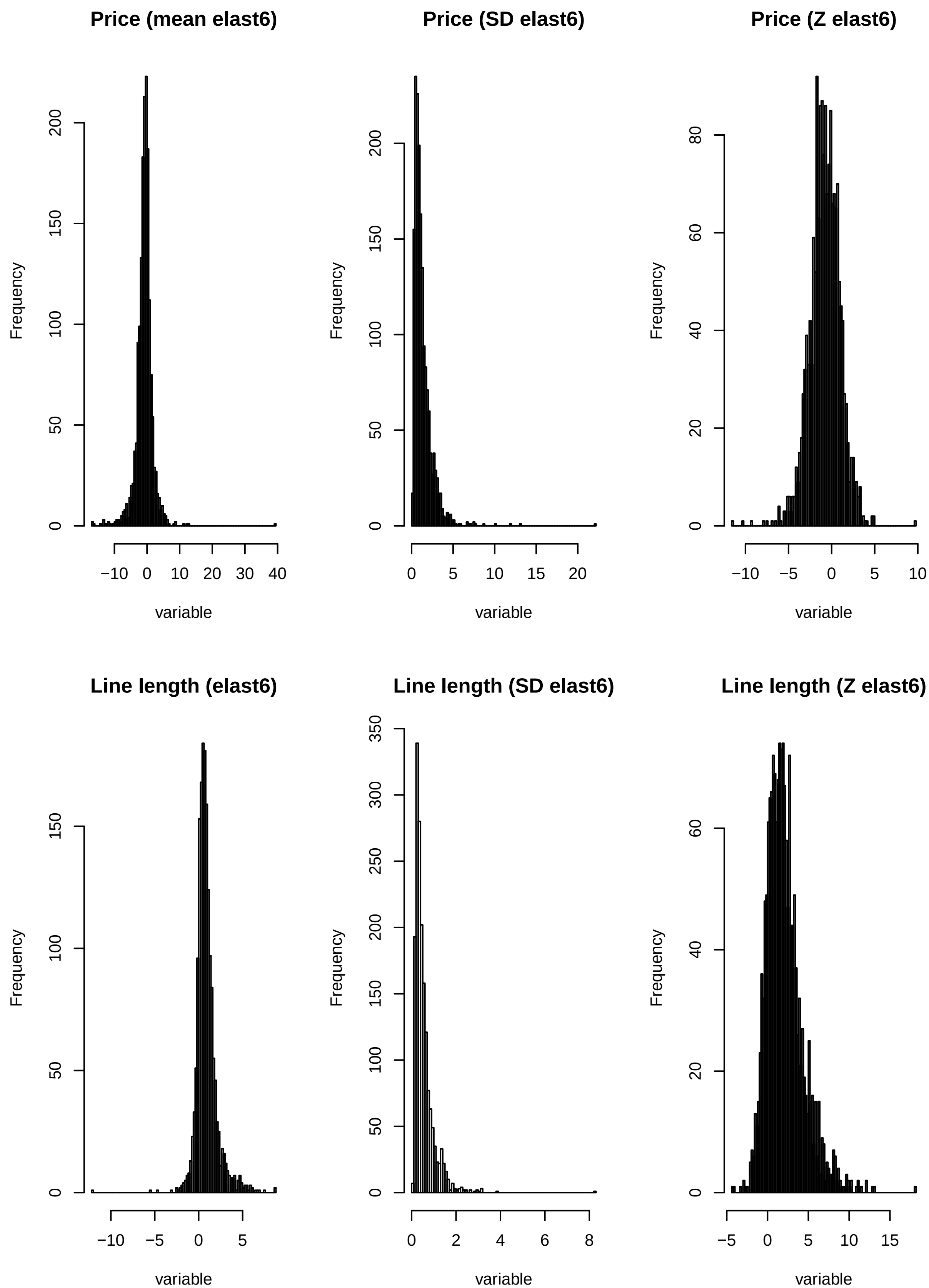
- Distribution of mean parameter
- Distribution of standard errors
- Distribution of z values

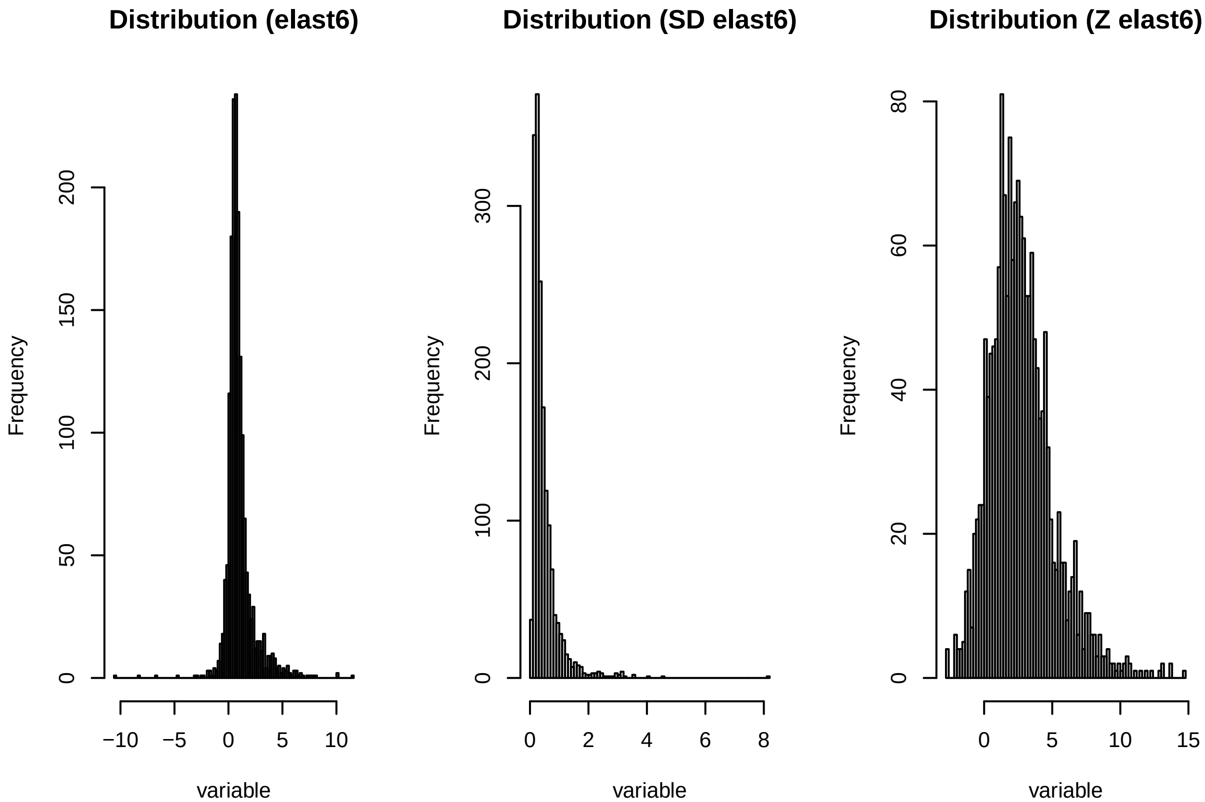
Short-term (elast1)



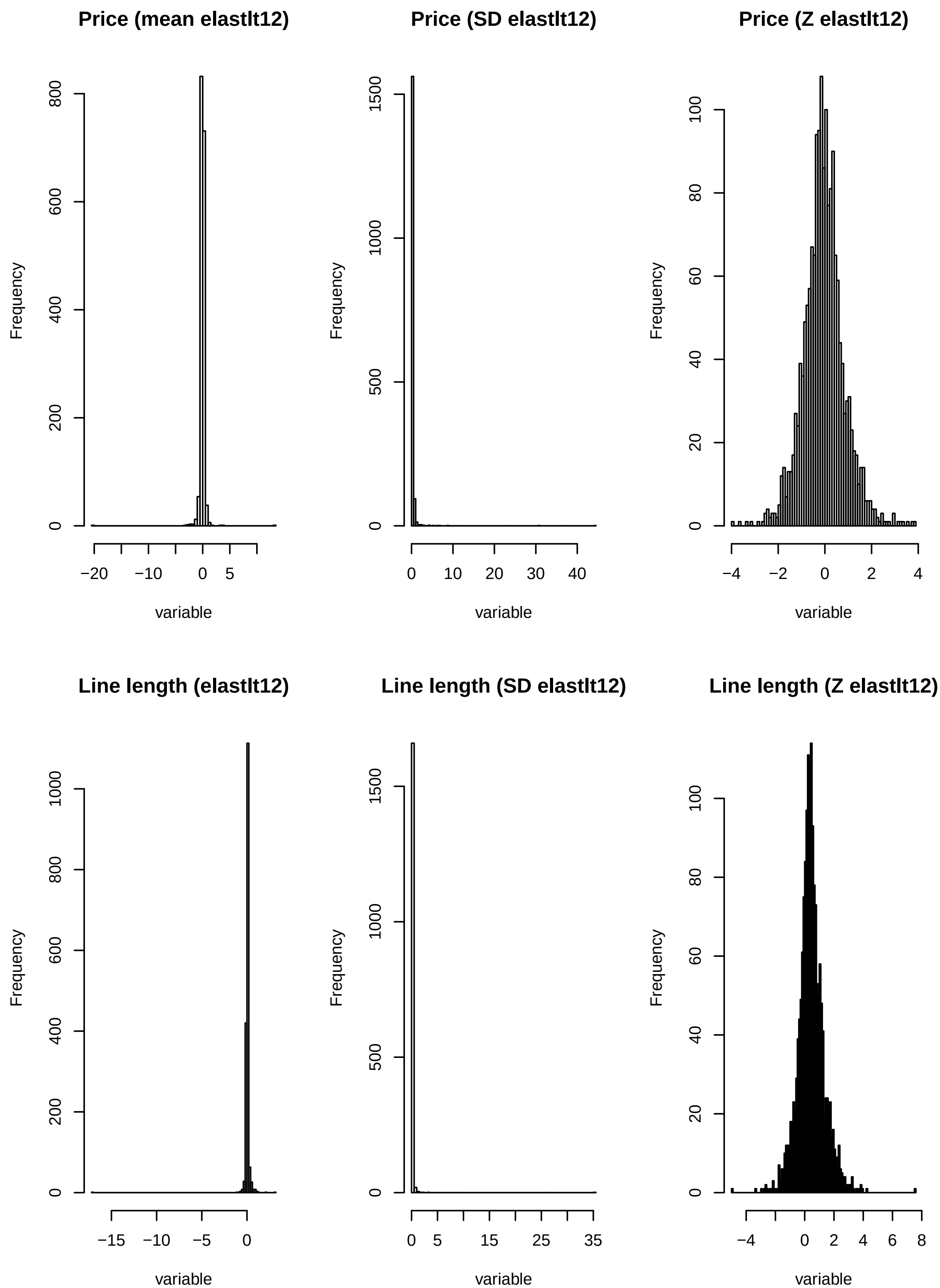

Distribution (elast1)
Frequency
variable
Distribution (SD elast1)
Frequency
variable
Distribution (Z elast1)
Frequency
variable

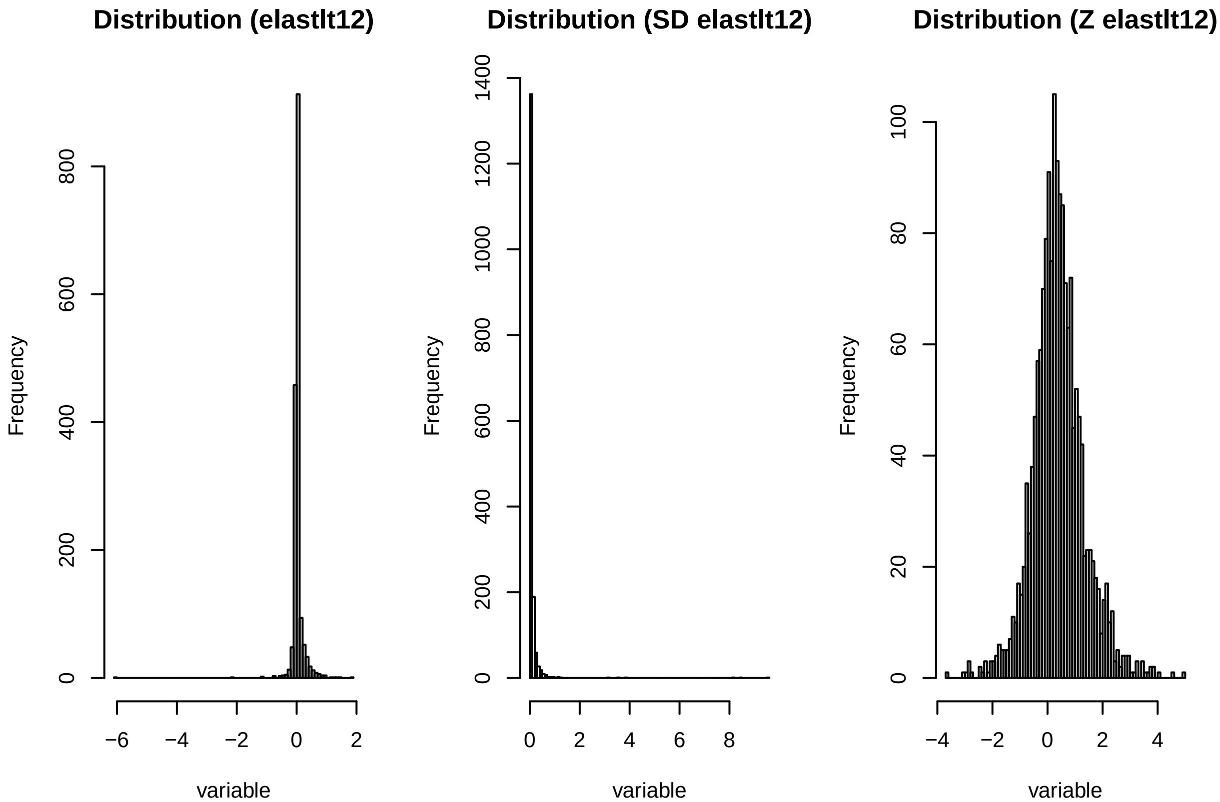
Dust-settling (6 months) (elast6)




Distribution (elast6)
Frequency
0
50
100
150
200
−10
−5
0
5
10
variable
Distribution (SD elast6)
Frequency
0
100
200
300
0
2
4
6
8
variable
Distribution (Z elast6)
Frequency
0
20
40
60
80
0
5
10
15
variable

Long-term (12 months) (elast12lt)




Distribution (elastlt12)
Frequency
0
200
400
600
800
−6
−4
−2
0
2
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
−4
−2
0
2
4
variable