

Robustness Supplement

8 May, 2013

This not-for-publication supplement contains the detailed robustness results for the paper *Sticky prices or rational inattention – What can we learn from sectoral price data?* by Daniel Kaufmann and Sarah Lein. This supplement is summarised in the main paper’s table “Qualitative summary of key results”.

1 Main results (BGM)

This section gives the main results of the paper. The specification replicates the approach used in Boivin et al. (2009), BGM, but uses Swiss data. The regression results also show coefficients on additional control variables not reported in the paper. Robust standard errors are given in brackets. Notes to the tables are given in the paper.

Table 1: *Descriptive statistics*

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	$sd(\pi_{it})$	$sd(\lambda_i \mathbf{C}_t)$	$sd(e_{it})$	R^2	$\rho(\pi_{it})$	$\rho(\lambda_i \mathbf{C}_t)$	$\rho(e_{it})$
Aggregate inflation	0.54	0.39	0.38	0.52	0.79	0.92	0.18
Sectoral inflation							
Average	1.18	0.53	1.03	0.31	0.53	0.85	0.18
Median	0.87	0.47	0.70	0.30	0.57	0.89	0.24

Table 2: *Correlation of descriptive statistics*

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	$sd(\pi_{it})$	$sd(\lambda_i \mathbf{C}_t)$	$sd(e_{it})$	$\frac{sd(e_{it})}{sd(\lambda_i \mathbf{C}_t)}$	R^2	FPC_i	$speed_i^{macro}$	$speed_i^{idio}$
$sd(\pi_{it})$	1.00							
$sd(\lambda_i \mathbf{C}_t)$	0.73	1.00						
$sd(e_{it})$	1.00	0.67	1.00					
$\frac{sd(e_{it})}{sd(\lambda_i \mathbf{C}_t)}$	0.50	-0.08	0.55	1.00				
R^2	-0.49	-0.01	-0.55	-0.74	1.00			
FPC_i	0.77	0.56	0.76	0.43	-0.30	1.00		
$speed_i^{macro}$	0.38	0.28	0.39	0.33	-0.44	0.36	1.00	
$speed_i^{idio}$	0.24	0.03	0.26	0.38	-0.39	0.05	0.15	1.00

Figure 1: *Impulse responses of sectoral prices*

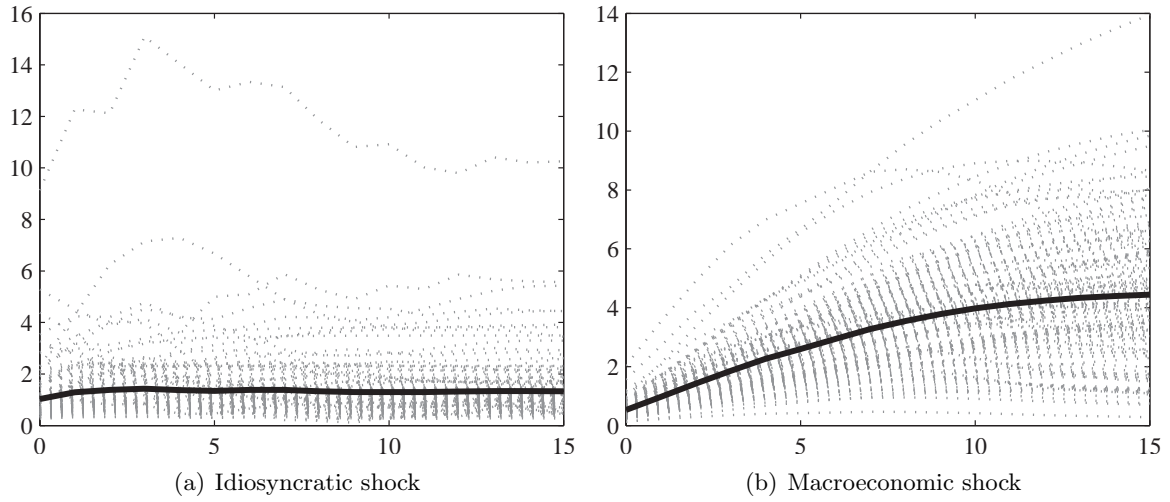
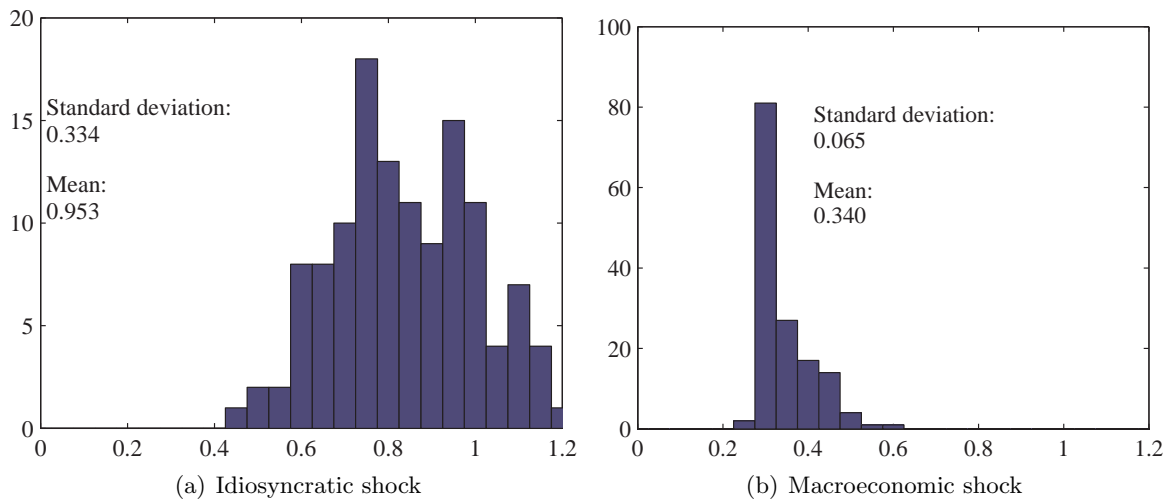


Figure 2: *Histogram of speed of response*



Specification (1): Main results (BGM)

Table 3: *Size of response to a macroeconomic shock after four quarters*

$\text{resp}_{i,4}^{\text{macro}}$	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\text{sd}(e_{it})$	0.454*** [0.052]		-0.076* [0.038]					
Rel. price EU15	-0.378 [0.277]	-0.095 [0.120]	-0.066 [0.112]	-0.214 [0.293]	-0.487 [0.334]	-0.350 [0.299]	-0.449 [0.329]	-0.179 [0.280]
Tradable	-0.168 [0.322]	0.048 [0.091]	0.050 [0.083]	-0.347 [0.295]	-0.181 [0.403]	-0.397 [0.338]	-0.187 [0.403]	-0.271 [0.301]
% imported	0.191 [0.232]	-0.383*** [0.114]	-0.404*** [0.109]	0.348 [0.278]	0.118 [0.272]	0.398 [0.341]	0.143 [0.283]	-0.130 [0.240]
Goods	-0.337 [0.284]	-0.145** [0.067]	-0.113* [0.064]	-0.051 [0.288]	-0.039 [0.375]	0.116 [0.316]	-0.060 [0.369]	0.194 [0.286]
Admin	-0.124 [0.173]	0.078 [0.077]	0.118 [0.081]	0.207 [0.210]	0.584** [0.240]	0.472* [0.261]	0.567** [0.232]	0.774** [0.311]
$\text{sd}(\lambda_i \mathbf{C}_t)$		2.993*** [0.131]	3.204*** [0.179]					
$\frac{\text{sd}(e_{it})}{\text{sd}(\lambda_i \mathbf{C}_t)}$				-0.071 [0.057]				-0.228*** [0.041]
FPC_i					2.721*** [1.022]		2.761** [1.057]	4.031*** [1.087]
Size_i						0.502 [2.259]	-0.903 [1.876]	
Constant	2.167*** [0.387]	0.627*** [0.180]	0.538*** [0.178]	2.385*** [0.374]	2.114*** [0.422]	2.216*** [0.437]	2.160*** [0.442]	1.982*** [0.342]
Observations	147	147	147	147	114	114	114	114
R^2	0.36	0.86	0.86	0.07	0.24	0.06	0.25	0.39

Specification (1): Main results (BGM)

Table 4: *Speed of response to a macroeconomic shock*

$\text{speed}_i^{\text{macro}}$	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\text{sd}(e_{it})$	0.023*** [0.008]		0.022** [0.009]					
Rel. price EU15	0.059** [0.023]	0.068** [0.026]	0.059** [0.024]	0.049** [0.024]	0.068*** [0.025]	0.073** [0.028]	0.068*** [0.026]	0.055** [0.026]
Tradable	-0.005 [0.017]	-0.004 [0.017]	-0.004 [0.017]	-0.004 [0.020]	0.006 [0.020]	-0.005 [0.018]	0.006 [0.020]	0.010 [0.022]
% imported	0.041* [0.022]	0.034 [0.023]	0.040* [0.022]	0.059** [0.023]	0.000 [0.027]	0.014 [0.029]	0.000 [0.028]	0.010 [0.027]
Goods	0.029** [0.012]	0.038*** [0.011]	0.029** [0.012]	0.018 [0.015]	0.032* [0.019]	0.041*** [0.016]	0.032* [0.018]	0.023 [0.021]
Admin	-0.022* [0.012]	-0.010 [0.013]	-0.022* [0.012]	-0.021** [0.010]	-0.004 [0.016]	-0.009 [0.014]	-0.004 [0.016]	-0.011 [0.015]
$\text{sd}(\lambda_i \mathbf{C}_t)$		0.066*** [0.020]	0.003 [0.028]					
$\frac{\text{sd}(e_{it})}{\text{sd}(\lambda_i \mathbf{C}_t)}$				0.014*** [0.004]				0.009** [0.004]
FPC _i					0.147*** [0.048]		0.147*** [0.050]	0.094 [0.061]
Size _i						0.076 [0.127]	0.001 [0.141]	
Constant	0.209*** [0.031]	0.181*** [0.038]	0.208*** [0.037]	0.216*** [0.031]	0.197*** [0.033]	0.200*** [0.035]	0.197*** [0.031]	0.202*** [0.033]
Observations	147	147	147	147	114	114	114	114
R ²	0.30	0.23	0.30	0.28	0.24	0.14	0.24	0.29

Table 5: *Frequency of price changes*

FPC_i	(1)	(2)	(3)	(4)
$sd(e_{it})$	0.097*** [0.010]		0.094*** [0.015]	
Rel. price EU15	0.013 [0.042]	0.082 [0.060]	0.016 [0.043]	-0.008 [0.060]
Tradable	-0.040 [0.033]	-0.043 [0.066]	-0.039 [0.034]	-0.047 [0.031]
% imported	0.066** [0.030]	0.054 [0.038]	0.064** [0.030]	0.127** [0.050]
Goods	0.006 [0.041]	0.030 [0.064]	0.006 [0.042]	0.001 [0.044]
Admin	-0.112*** [0.042]	-0.073** [0.029]	-0.112*** [0.042]	-0.068* [0.034]
$sd(\lambda_i \mathbf{C}_t)$		0.299*** [0.088]	0.015 [0.055]	
$\frac{sd(e_{it})}{sd(\lambda_i \mathbf{C}_t)}$				0.040*** [0.011]
Constant	0.036 [0.058]	-0.117 [0.081]	0.028 [0.062]	0.060 [0.070]
Observations	114	114	114	114
R^2	0.63	0.35	0.63	0.27

2 Benchmark results (MMW)

This section gives the main benchmark results of the paper. The specification uses the approach by Mackowiak et al. (2009), MMW, but uses Swiss data. Instead of standard errors, we report 90% percentiles of the posterior distribution.

Table 6: *Correlation of descriptive statistics*

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	$sd(\pi_{it})$	$sd(\lambda_i \mathbf{C}_t)$	$sd(e_{it})$	$\frac{sd(e_{it})}{sd(\lambda_i \mathbf{C}_t)}$	R^2	FPC_i	$speed_i^{macro}$	$speed_i^{idio}$
$sd(\pi_{it})$	1.00							
$sd(\lambda_i \mathbf{C}_t)$	0.89	1.00						
$sd(e_{it})$	0.96	0.83	1.00					
$\frac{sd(e_{it})}{sd(\lambda_i \mathbf{C}_t)}$	0.34	-0.02	0.43	1.00				
R^2	-0.31	0.05	-0.41	-0.94	1.00			
FPC_i	0.77	0.76	0.80	0.26	-0.24	1.00		
$speed_i^{macro}$	0.27	0.37	0.15	-0.03	0.08	0.18	1.00	
$speed_i^{idio}$	0.26	0.16	0.23	0.26	-0.28	0.09	0.12	1.00

Figure 3: *Impulse responses of sectoral prices*

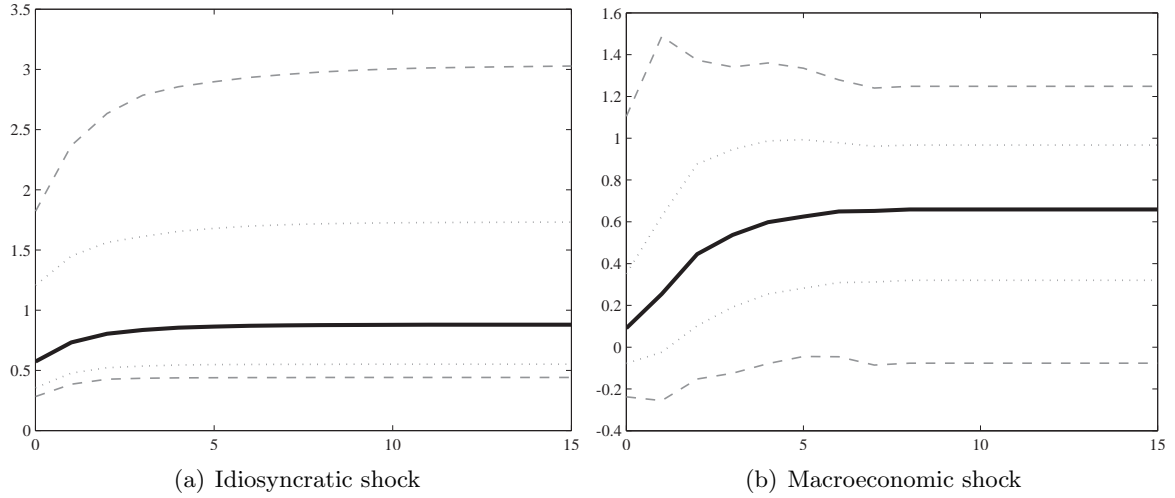


Table 7: Size of response to a macroeconomic shock

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$resp_{i,4}^{macro}$								
$sd(e_{it})$	0.049 (-0.272, 0.357)		-0.267 (-0.622, 0.037)					
$sd(\lambda_i C_t)$		0.291 (-0.213, 0.694)	0.658 (0.245, 1.086)					
$\frac{sd(e_{it})}{sd(\lambda_i C_t)}$				-0.287 (-0.439, -0.160)				-0.325 (-0.487, -0.192)
FPC _{<i>i</i>}					0.152 (-1.662, 1.822)		0.008 (-1.866, 1.715)	0.511 (-1.351, 2.153)
Size _{<i>i</i>}						2.922 (0.830, 5.040)	2.970 (0.653, 5.183)	
Constant	0.525 (0.302, 0.770)	0.371 (0.125, 0.701)	0.325 (0.108, 0.618)	0.897 (0.723, 1.090)	0.530 (0.297, 0.792)	0.276 (0.089, 0.471)	0.274 (0.048, 0.515)	0.879 (0.627, 1.152)
Observations	147	147	147	147	114	114	114	114
R^2	0.05 (0.00, 0.28)	0.09 (0.00, 0.41)	0.21 (0.06, 0.44)	0.09 (0.03, 0.18)	0.04 (0.00, 0.21)	0.05 (0.01, 0.12)	0.11 (0.03, 0.25)	0.16 (0.07, 0.33)

Specification (8): Benchmark results (MMW)

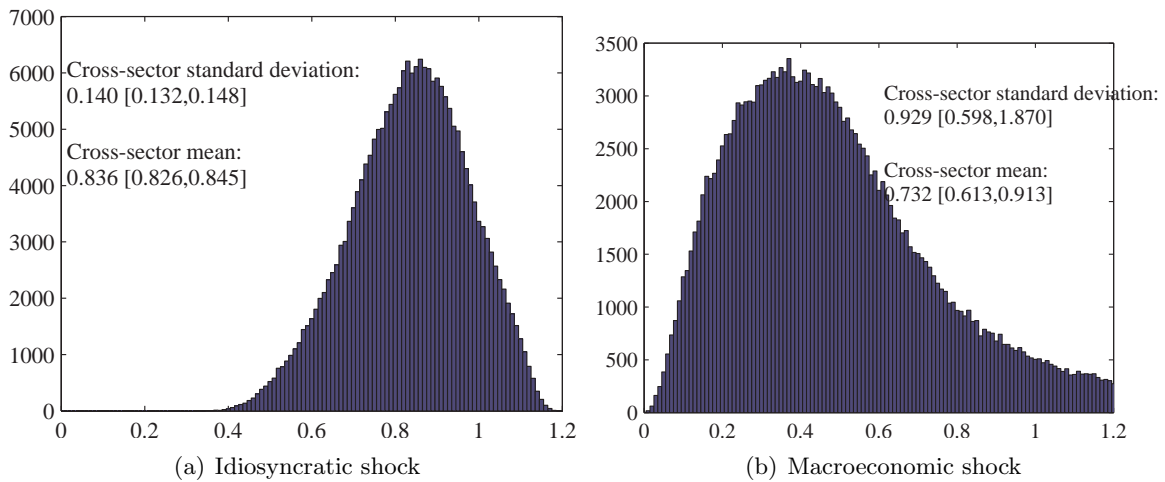
Table 8: Speed of response to a macroeconomic shock

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\text{speed}_i^{\text{macro}}$								
$\text{sd}(\varepsilon_{it})$	0.170 (0.069, 0.404)		-0.450 (-1.122, -0.049)					
$\text{sd}(\lambda_i \mathbf{C}_t)$		0.673 (0.379, 1.263)	1.301 (0.602, 2.757)					
$\frac{\text{sd}(\varepsilon_{it})}{\text{sd}(\lambda_i \mathbf{C}_t)}$				-0.049 (-0.346, 0.251)				0.166 (-0.016, 0.486)
FPC _{<i>i</i>}					0.848 (0.095, 2.483)		0.762 (0.019, 2.406)	0.679 (-0.174, 2.318)
Size _{<i>i</i>}						1.878 (-0.526, 5.852)	1.407 (-1.298, 5.203)	
Constant	0.588 (0.422, 0.757)	0.270 (-0.032, 0.453)	0.200 (-0.166, 0.429)	0.776 (0.455, 1.214)	0.484 (0.301, 0.671)	0.431 (0.131, 0.726)	0.354 (0.021, 0.627)	0.295 (-0.051, 0.544)
Observations	147	147	147	147	114	114	114	114
R^2	0.02 (0.00, 0.12)	0.13 (0.05, 0.28)	0.21 (0.06, 0.38)	0.00 (0.00, 0.03)	0.03 (0.00, 0.18)	0.02 (0.00, 0.10)	0.05 (0.01, 0.21)	0.06 (0.01, 0.22)

Table 9: *Frequency of price changes*

FPC _{<i>i</i>}	(1)	(2)	(3)	(4)
sd(e_{it})	0.118 (0.112, 0.128)		0.091 (0.048, 0.134)	
sd($\lambda_i \mathbf{C}_t$)		0.207 (0.170, 0.251)	0.056 (-0.022, 0.140)	
$\frac{\text{sd}(e_{it})}{\text{sd}(\lambda_i \mathbf{C}_t)}$				0.068 (0.035, 0.105)
Constant	0.051 (0.045, 0.057)	0.015 (-0.009, 0.036)	0.038 (0.017, 0.054)	0.064 (0.021, 0.105)
Observations	114	114	114	114
R^2	0.64 (0.62, 0.66)	0.58 (0.51, 0.64)	0.65 (0.64, 0.67)	0.07 (0.02, 0.17)

Figure 4: *Histogram of speed of response*



3 Alternative specifications (BGM)

This section gives alternative specifications summarised by the table “Qualitative summary of key results” in the paper. The alternative specifications use the approach by BGM but make the BGM benchmark more comparable to the MMW benchmark. We show the results changing one difference at a time but keep the changes for subsequent specifications. The last alternative specification is therefore most similar to the MMW benchmark. Only those results are reported that are affected by the change.

3.1 Without additional controls

Table 10: *Size of response to a macroeconomic shock*

$\text{resp}_{i,4}^{\text{macro}}$	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\text{sd}(e_{it})$	0.443*** [0.059]		-0.064* [0.036]					
$\text{sd}(\lambda_i \mathbf{C}_t)$		2.857*** [0.141]	3.028*** [0.188]					
$\frac{\text{sd}(e_{it})}{\text{sd}(\lambda_i \mathbf{C}_t)}$				-0.081* [0.046]				-0.204*** [0.039]
FPC_i					2.630** [1.040]		2.702** [1.079]	3.723*** [1.071]
Size_i						0.219 [2.063]	-1.366 [1.812]	
Constant	1.401*** [0.065]	0.343*** [0.061]	0.318*** [0.067]	2.018*** [0.087]	1.437*** [0.140]	1.800*** [0.208]	1.556*** [0.191]	1.704*** [0.116]
Observations	147	147	147	147	114	114	114	114
R^2	0.31	0.82	0.82	0.03	0.18	0.00	0.18	0.32

Table 11: *Speed of response to a macroeconomic shock*

$\text{speed}_i^{\text{macro}}$	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\text{sd}(e_{it})$	0.025*** [0.008]		0.023*** [0.009]					
$\text{sd}(\lambda_i \mathbf{C}_t)$		0.071*** [0.022]	0.009 [0.029]					
$\frac{\text{sd}(e_{it})}{\text{sd}(\lambda_i \mathbf{C}_t)}$				0.013*** [0.004]				0.010** [0.004]
FPC_i					0.159*** [0.046]		0.157*** [0.049]	0.105* [0.055]
Size_i						0.125 [0.131]	0.032 [0.145]	
Constant	0.315*** [0.008]	0.303*** [0.012]	0.312*** [0.014]	0.314*** [0.008]	0.311*** [0.008]	0.323*** [0.014]	0.308*** [0.014]	0.298*** [0.009]
Observations	147	147	147	147	114	114	114	114
R^2	0.15	0.08	0.15	0.11	0.13	0.01	0.13	0.19

Table 12: *Frequency of price changes*

FPC_i	(1)	(2)	(3)	(4)
$\text{sd}(e_{it})$	0.095*** [0.011]		0.090*** [0.015]	
$\text{sd}(\lambda_i \mathbf{C}_t)$		0.298*** [0.089]	0.034 [0.057]	
$\frac{\text{sd}(e_{it})}{\text{sd}(\lambda_i \mathbf{C}_t)}$				0.035*** [0.009]
Constant	0.049*** [0.009]	-0.004 [0.041]	0.037* [0.020]	0.073*** [0.014]
Observations	114	114	114	114
R^2	0.58	0.31	0.58	0.19

3.2 Price data only

Table 13: *Descriptive statistics*

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	$\text{sd}(\pi_{it})$	$\text{sd}(\boldsymbol{\lambda}_i \mathbf{C}_t)$	$\text{sd}(e_{it})$	R^2	$\rho(\pi_{it})$	$\rho(\boldsymbol{\lambda}_i \mathbf{C}_t)$	$\rho(e_{it})$
Aggregate inflation	0.54	0.39	0.38	0.52	0.79	0.89	0.17
Sectoral inflation							
Average	1.18	0.59	0.99	0.35	0.53	0.83	0.14
Median	0.87	0.51	0.70	0.37	0.57	0.85	0.23

Table 14: *Correlation of descriptive statistics*

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	$\text{sd}(\pi_{it})$	$\text{sd}(\boldsymbol{\lambda}_i \mathbf{C}_t)$	$\text{sd}(e_{it})$	$\frac{\text{sd}(e_{it})}{\text{sd}(\boldsymbol{\lambda}_i \mathbf{C}_t)}$	R^2	FPC_i	$\text{speed}_i^{\text{macro}}$	$\text{speed}_i^{\text{idio}}$
$\text{sd}(\pi_{it})$	1.00							
$\text{sd}(\boldsymbol{\lambda}_i \mathbf{C}_t)$	0.82	1.00						
$\text{sd}(e_{it})$	0.99	0.76	1.00					
$\frac{\text{sd}(e_{it})}{\text{sd}(\boldsymbol{\lambda}_i \mathbf{C}_t)}$	0.41	-0.02	0.47	1.00				
R^2	-0.44	-0.04	-0.51	-0.81	1.00			
FPC_i	0.77	0.69	0.76	0.33	-0.31	1.00		
$\text{speed}_i^{\text{macro}}$	0.41	0.42	0.40	0.29	-0.36	0.35	1.00	
$\text{speed}_i^{\text{idio}}$	0.24	0.19	0.24	0.22	-0.25	0.05	0.30	1.00

Figure 5: *Impulse responses of sectoral prices*

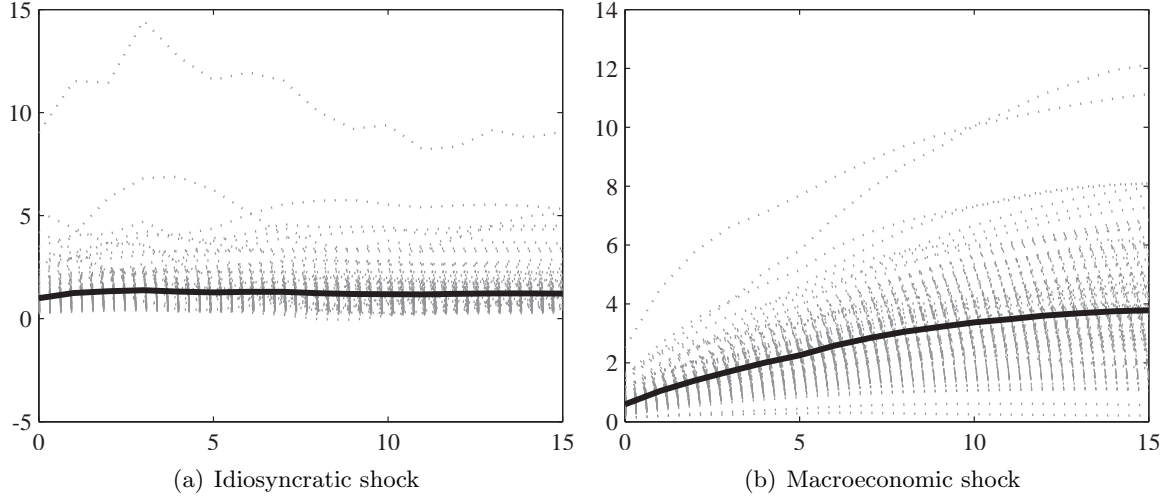


Table 15: *Size of response to a macroeconomic shock*

$resp_{i,4}^{macro}$	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$sd(e_{it})$	0.550*** [0.041]		0.037 [0.073]					
$sd(\lambda_i C_t)$		2.164*** [0.171]	2.076*** [0.270]					
$\frac{sd(e_{it})}{sd(\lambda_i C_t)}$				-0.077 [0.083]				-0.211*** [0.051]
FPC_i					3.551*** [0.987]		3.609*** [1.010]	4.111*** [1.017]
$Size_i$						1.008 [2.611]	-1.109 [2.137]	
Constant	1.165*** [0.056]	0.428*** [0.088]	0.443*** [0.093]	1.841*** [0.116]	1.157*** [0.130]	1.581*** [0.241]	1.254*** [0.218]	1.451*** [0.131]
Observations	147	147	147	147	114	114	114	114
R^2	0.49	0.79	0.79	0.01	0.35	0.00	0.35	0.42

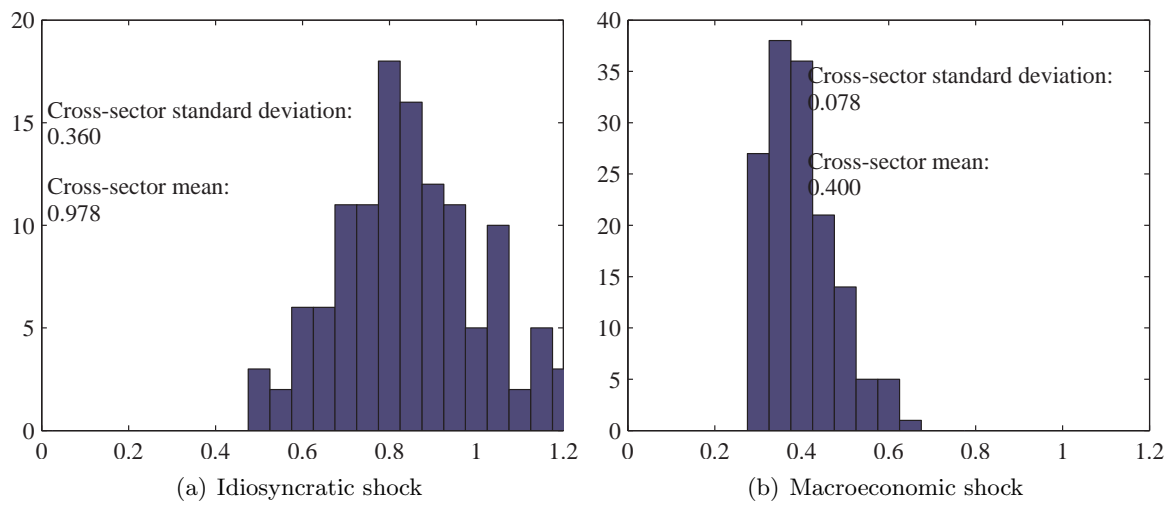
Table 16: *Speed of response to a macroeconomic shock*

$\text{speed}_i^{\text{macro}}$	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\text{sd}(e_{it})$	0.031*** [0.009]		0.015 [0.013]					
$\text{sd}(\lambda_i \mathbf{C}_t)$		0.102*** [0.023]	0.067 [0.042]					
$\frac{\text{sd}(e_{it})}{\text{sd}(\lambda_i \mathbf{C}_t)}$				0.021** [0.009]				0.023** [0.011]
FPC_i					0.167*** [0.031]		0.151*** [0.038]	0.106*** [0.039]
Size_i						0.409*** [0.141]	0.321** [0.155]	
Constant	0.369*** [0.010]	0.339*** [0.014]	0.345*** [0.017]	0.365*** [0.015]	0.361*** [0.008]	0.347*** [0.014]	0.333*** [0.014]	0.329*** [0.016]
Observations	147	147	147	147	114	114	114	114
R^2	0.16	0.18	0.19	0.08	0.12	0.06	0.16	0.26

Table 17: *Frequency of price changes*

FPC_i	(1)	(2)	(3)	(4)
$\text{sd}(e_{it})$	0.097*** [0.011]		0.082*** [0.020]	
$\text{sd}(\lambda_i \mathbf{C}_t)$		0.314*** [0.054]	0.066 [0.062]	
$\frac{\text{sd}(e_{it})}{\text{sd}(\lambda_i \mathbf{C}_t)}$				0.040** [0.016]
Constant	0.049*** [0.009]	-0.026 [0.026]	0.028 [0.020]	0.075*** [0.022]
Observations	114	114	114	114
R^2	0.58	0.47	0.59	0.11

Figure 6: *Histogram of speed of response*



3.3 Excluding outliers

Table 18: *Descriptive statistics*

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	$sd(\pi_{it})$	$sd(\boldsymbol{\lambda}_i \mathbf{C}_t)$	$sd(e_{it})$	R^2	$\rho(\pi_{it})$	$\rho(\boldsymbol{\lambda}_i \mathbf{C}_t)$	$\rho(e_{it})$
Aggregate inflation	0.54	0.40	0.37	0.53	0.79	0.90	0.16
Sectoral inflation							
Average	1.05	0.54	0.88	0.35	0.56	0.85	0.18
Median	0.75	0.46	0.62	0.35	0.60	0.87	0.21

Table 19: *Correlation of descriptive statistics*

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	$sd(\pi_{it})$	$sd(\boldsymbol{\lambda}_i \mathbf{C}_t)$	$sd(e_{it})$	$\frac{sd(e_{it})}{sd(\boldsymbol{\lambda}_i \mathbf{C}_t)}$	R^2	FPC_i	$speed_i^{macro}$	$speed_i^{idio}$
$sd(\pi_{it})$	1.00							
$sd(\boldsymbol{\lambda}_i \mathbf{C}_t)$	0.87	1.00						
$sd(e_{it})$	0.99	0.82	1.00					
$\frac{sd(e_{it})}{sd(\boldsymbol{\lambda}_i \mathbf{C}_t)}$	0.15	-0.11	0.19	1.00				
R^2	-0.39	-0.02	-0.47	-0.48	1.00			
FPC_i	0.81	0.75	0.80	0.20	-0.30	1.00		
$speed_i^{macro}$	0.44	0.39	0.44	0.17	-0.43	0.35	1.00	
$speed_i^{idio}$	0.16	0.06	0.17	0.10	-0.24	0.13	0.23	1.00

Figure 7: *Impulse responses of sectoral prices*

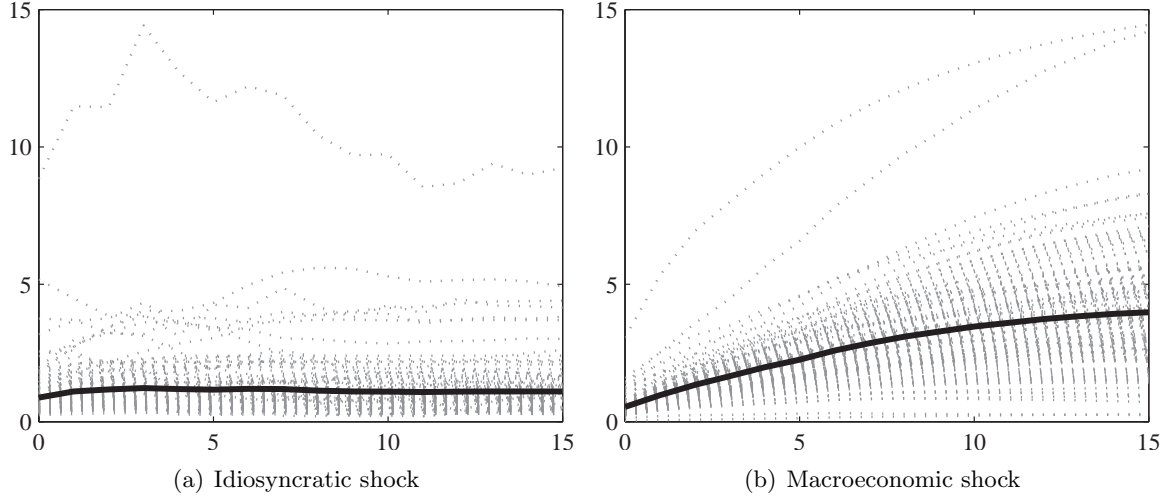


Table 20: *Size of response to a macroeconomic shock*

$resp_{i,4}^{macro}$	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$sd(e_{it})$	0.586*** [0.115]		-0.080 [0.106]					
$sd(\lambda_i C_t)$		2.081*** [0.206]	2.263*** [0.302]					
$\frac{sd(e_{it})}{sd(\lambda_i C_t)}$				-0.071*** [0.016]				-0.113*** [0.028]
FPC_i					4.008*** [1.323]		4.048*** [1.364]	4.428*** [1.301]
$Size_i$						1.630 [2.003]	-0.744 [1.888]	
Constant	1.142*** [0.099]	0.542*** [0.101]	0.515*** [0.107]	1.785*** [0.059]	1.043*** [0.165]	1.474*** [0.199]	1.108*** [0.188]	1.200*** [0.150]
Observations	147	147	147	147	114	114	114	114
R^2	0.45	0.73	0.74	0.04	0.40	0.01	0.40	0.50

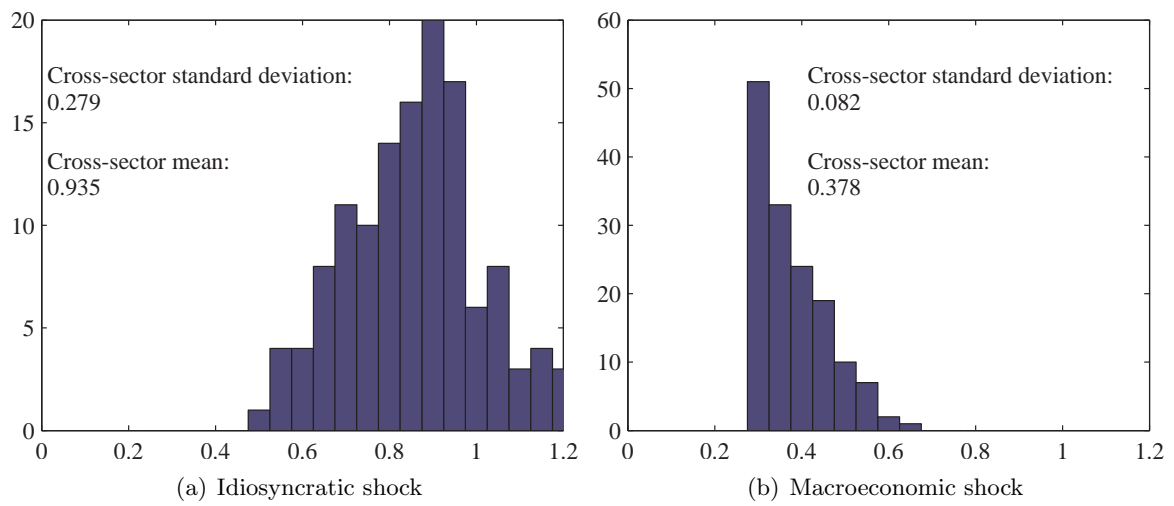
Table 21: *Speed of response to a macroeconomic shock*

$\text{speed}_i^{\text{macro}}$	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\text{sd}(e_{it})$	0.039*** [0.014]		0.033* [0.019]					
$\text{sd}(\lambda_i \mathbf{C}_t)$		0.097*** [0.029]	0.023 [0.049]					
$\frac{\text{sd}(e_{it})}{\text{sd}(\lambda_i \mathbf{C}_t)}$				0.006 [0.006]				0.005 [0.005]
FPC_i					0.188*** [0.041]		0.168*** [0.042]	0.170*** [0.042]
Size_i						0.481*** [0.176]	0.382** [0.179]	
Constant	0.343*** [0.013]	0.326*** [0.016]	0.337*** [0.020]	0.367*** [0.011]	0.340*** [0.009]	0.322*** [0.017]	0.307*** [0.017]	0.334*** [0.011]
Observations	147	147	147	147	114	114	114	114
R^2	0.20	0.15	0.20	0.03	0.12	0.07	0.17	0.15

Table 22: *Frequency of price changes*

FPC_i	(1)	(2)	(3)	(4)
$\text{sd}(e_{it})$	0.109*** [0.011]		0.084*** [0.020]	
$\text{sd}(\lambda_i \mathbf{C}_t)$		0.314*** [0.033]	0.085 [0.063]	
$\frac{\text{sd}(e_{it})}{\text{sd}(\lambda_i \mathbf{C}_t)}$				0.011** [0.005]
Constant	0.049*** [0.008]	-0.010 [0.015]	0.028 [0.018]	0.125*** [0.013]
Observations	114	114	114	114
R^2	0.64	0.56	0.65	0.04

Figure 8: *Histogram of speed of response*



3.4 MMW price data set

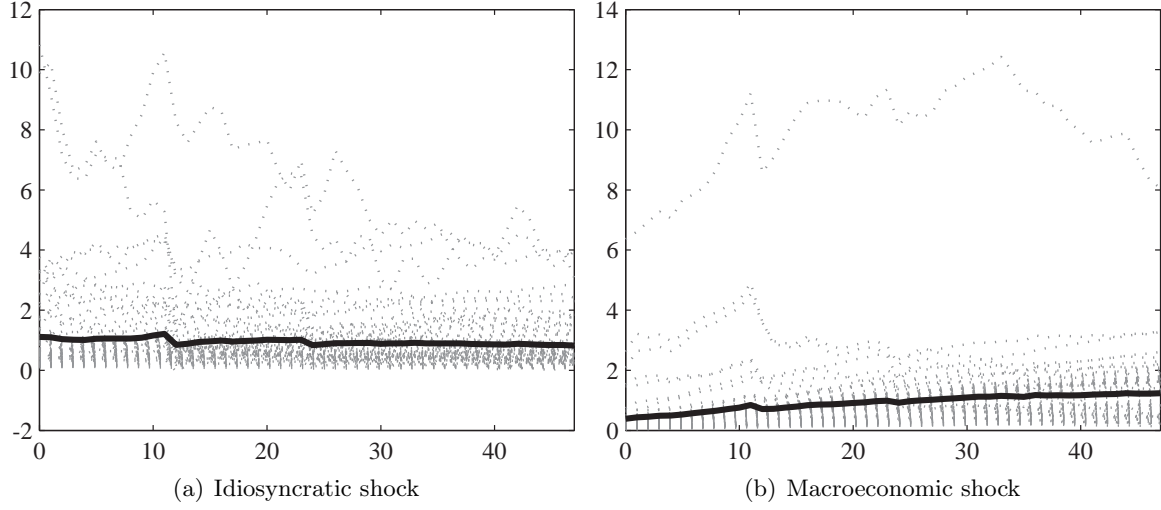
This specification uses the monthly US data set from Mackowiak et al. (2009).

Table 23: *Descriptive statistics*

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	$sd(\pi_{it})$	$sd(\boldsymbol{\lambda}_i \mathbf{C}_t)$	$sd(e_{it})$	R^2	$\rho(\pi_{it})$	$\rho(\boldsymbol{\lambda}_i \mathbf{C}_t)$	$\rho(e_{it})$
Aggregate inflation	0.18	0.16	0.09	0.76	0.77	0.77	0.56
Sectoral inflation							
Average	1.20	0.39	1.11	0.13	0.19	0.73	-0.21
Median	0.68	0.21	0.63	0.10	0.35	0.87	-0.21

Table 24: *Correlation of descriptive statistics*

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	$sd(\pi_{it})$	$sd(\boldsymbol{\lambda}_i \mathbf{C}_t)$	$sd(e_{it})$	$\frac{sd(e_{it})}{sd(\boldsymbol{\lambda}_i \mathbf{C}_t)}$	R^2	FPC_i	$speed_i^{macro}$	$speed_i^{idio}$
$sd(\pi_{it})$	1.00							
$sd(\boldsymbol{\lambda}_i \mathbf{C}_t)$	0.82	1.00						
$sd(e_{it})$	0.99	0.76	1.00					
$\frac{sd(e_{it})}{sd(\boldsymbol{\lambda}_i \mathbf{C}_t)}$	0.12	-0.18	0.16	1.00				
R^2	0.02	0.34	-0.05	-0.64	1.00			
FPC_i	0.44	0.46	0.41	0.04	0.17	1.00		
$speed_i^{macro}$	0.53	0.52	0.50	-0.10	0.21	0.54	1.00	
$speed_i^{idio}$	0.29	0.15	0.31	0.18	-0.20	0.21	0.26	1.00

Figure 9: *Impulse responses of sectoral prices*

Table 25: *Size of response to a macroeconomic shock*

$resp_{i,4}^{macro}$	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$sd(e_{it})$	0.610** [0.280]		-0.044*** [0.008]					
$sd(\lambda_i C_t)$		1.765*** [0.036]	1.835*** [0.044]					
$\frac{sd(e_{it})}{sd(\lambda_i C_t)}$				-0.094** [0.043]				-0.107*** [0.037]
FPC_i					3.412** [1.525]		3.412** [1.525]	3.485** [1.533]
$o.Size_i$						0.000 [.]	0.000 [.]	
Constant	0.170 [0.227]	0.167*** [0.017]	0.189*** [0.017]	1.230*** [0.313]	0.297** [0.146]	0.848*** [0.160]	0.297** [0.146]	0.721*** [0.135]
Observations	79	79	79	79	77	79	77	77
R^2	0.53	0.99	0.99	0.05	0.22	0.00	0.22	0.28

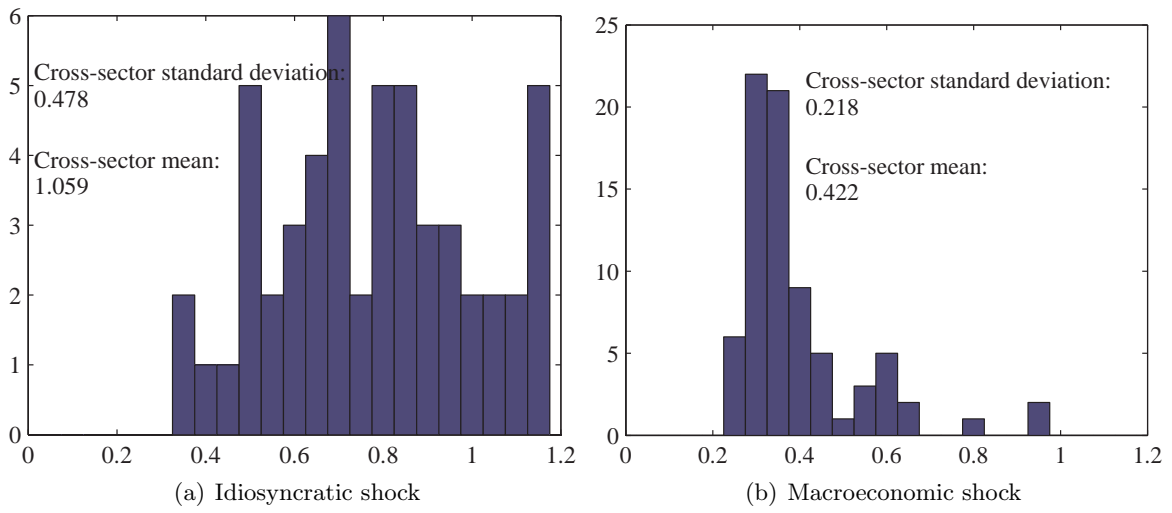
Table 26: *Speed of response to a macroeconomic shock*

$\text{speed}_i^{\text{macro}}$	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\text{sd}(e_{it})$	0.065*** [0.019]		0.033 [0.020]					
$\text{sd}(\lambda_i \mathbf{C}_t)$		0.143* [0.084]	0.090 [0.100]					
$\frac{\text{sd}(e_{it})}{\text{sd}(\lambda_i \mathbf{C}_t)}$				-0.007 [0.006]				-0.009* [0.005]
FPC_i					0.597*** [0.175]		0.597*** [0.175]	0.603*** [0.175]
o.Size_i						0.000 [.]	0.000 [.]	
Constant	0.349*** [0.018]	0.367*** [0.025]	0.350*** [0.023]	0.450*** [0.043]	0.325*** [0.023]	0.422*** [0.025]	0.325*** [0.023]	0.362*** [0.030]
Observations	79	79	79	79	77	79	77	77
R^2	0.25	0.27	0.30	0.01	0.29	0.00	0.29	0.31

Table 27: *Frequency of price changes*

FPC_i	(1)	(2)	(3)	(4)
$\text{sd}(e_{it})$	0.047*** [0.012]		0.016 [0.017]	
$\text{sd}(\lambda_i \mathbf{C}_t)$		0.114** [0.048]	0.089 [0.067]	
$\frac{\text{sd}(e_{it})}{\text{sd}(\lambda_i \mathbf{C}_t)}$				0.003 [0.007]
Constant	0.113*** [0.021]	0.122*** [0.023]	0.114*** [0.022]	0.157*** [0.042]
Observations	77	77	77	77
R^2	0.17	0.21	0.22	0.00

Figure 10: *Histogram of speed of response*



3.5 BGM price data set

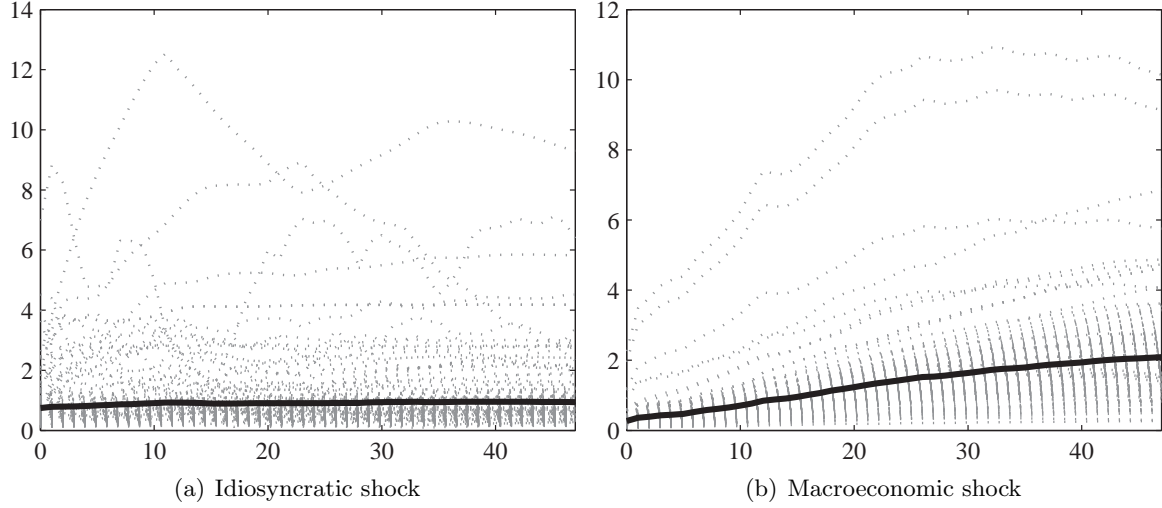
This specification uses the monthly US data set from Boivin et al. (2009).

Table 28: *Descriptive statistics*

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	$sd(\pi_{it})$	$sd(\boldsymbol{\lambda}_i \mathbf{C}_t)$	$sd(e_{it})$	R^2	$\rho(\pi_{it})$	$\rho(\boldsymbol{\lambda}_i \mathbf{C}_t)$	$\rho(e_{it})$
Aggregate inflation	0.30	0.27	0.12	0.85	0.91	0.90	0.49
Sectoral inflation							
Average	0.81	0.27	0.75	0.20	0.58	0.90	0.06
Median	0.57	0.21	0.52	0.13	0.69	0.93	0.13

Table 29: *Correlation of descriptive statistics*

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	$sd(\pi_{it})$	$sd(\boldsymbol{\lambda}_i \mathbf{C}_t)$	$sd(e_{it})$	$\frac{sd(e_{it})}{sd(\boldsymbol{\lambda}_i \mathbf{C}_t)}$	R^2	FPC_i	$speed_i^{macro}$	$speed_i^{idio}$
$sd(\pi_{it})$	1.00							
$sd(\boldsymbol{\lambda}_i \mathbf{C}_t)$	0.87	1.00						
$sd(e_{it})$	0.99	0.82	1.00					
$\frac{sd(e_{it})}{sd(\boldsymbol{\lambda}_i \mathbf{C}_t)}$	0.15	-0.11	0.19	1.00				
R^2	-0.39	-0.02	-0.47	-0.48	1.00			
FPC_i	0.81	0.75	0.80	0.20	-0.30	1.00		
$speed_i^{macro}$	0.44	0.39	0.44	0.17	-0.43	0.35	1.00	
$speed_i^{idio}$	0.16	0.06	0.17	0.10	-0.24	0.13	0.23	1.00

Figure 11: *Impulse responses of sectoral prices*

Table 30: *Size of response to a macroeconomic shock*

$\text{resp}_{i,4}^{\text{macro}}$	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\text{sd}(e_{it})$	0.407** [0.166]		-0.020 [0.029]					
$\text{sd}(\lambda_i \mathbf{C}_t)$		2.790*** [0.146]	2.823*** [0.151]					
$\frac{\text{sd}(e_{it})}{\text{sd}(\lambda_i \mathbf{C}_t)}$				-0.019 [0.016]				-0.030 [0.031]
FPC_i					2.797** [1.207]		2.797** [1.207]	2.824** [1.208]
o.Size_i						0.000 [.]	0.000 [.]	
Constant	0.462*** [0.094]	0.022 [0.032]	0.028 [0.031]	0.824*** [0.084]	0.419*** [0.129]	0.766*** [0.050]	0.419*** [0.129]	0.511*** [0.123]
Observations	194	194	194	194	112	194	112	112
R^2	0.22	0.93	0.93	0.01	0.32	0.00	0.32	0.33

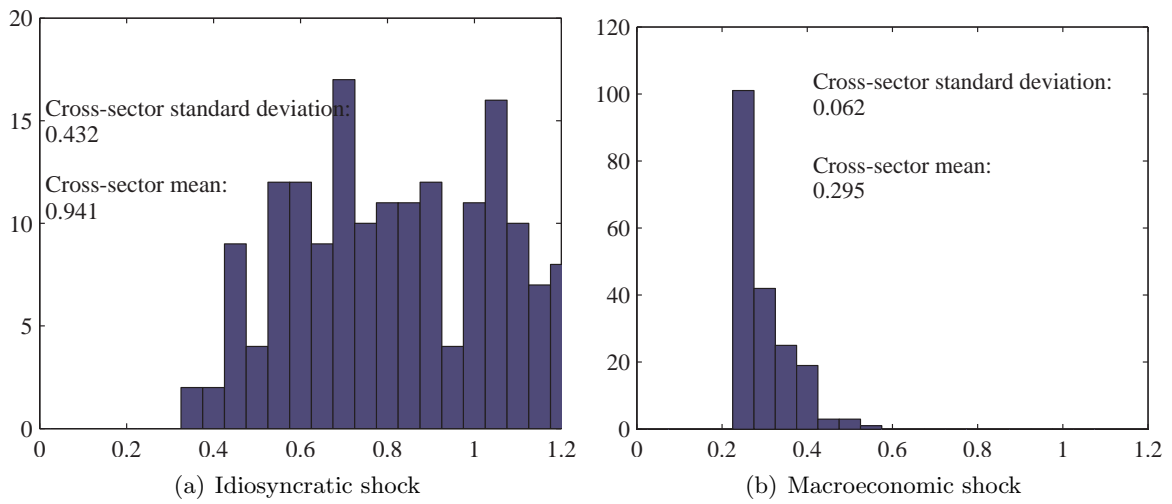
Table 31: *Speed of response to a macroeconomic shock*

$\text{speed}_i^{\text{macro}}$	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\text{sd}(e_{it})$	0.024*** [0.009]		0.015* [0.008]					
$\text{sd}(\lambda_i \mathbf{C}_t)$		0.085*** [0.020]	0.061*** [0.022]					
$\frac{\text{sd}(e_{it})}{\text{sd}(\lambda_i \mathbf{C}_t)}$				0.003 [0.002]				0.002 [0.003]
FPC_i					0.084** [0.035]		0.084** [0.035]	0.082** [0.036]
o.Size_i						0.000 [.]	0.000 [.]	
Constant	0.277*** [0.007]	0.272*** [0.007]	0.267*** [0.006]	0.285*** [0.007]	0.282*** [0.008]	0.295*** [0.004]	0.282*** [0.008]	0.275*** [0.010]
Observations	194	194	194	194	112	194	112	112
R^2	0.10	0.11	0.14	0.02	0.05	0.00	0.05	0.07

Table 32: *Frequency of price changes*

FPC_i	(1)	(2)	(3)	(4)
$\text{sd}(e_{it})$	0.067* [0.036]		0.022 [0.020]	
$\text{sd}(\lambda_i \mathbf{C}_t)$		0.347*** [0.029]	0.317*** [0.040]	
$\frac{\text{sd}(e_{it})}{\text{sd}(\lambda_i \mathbf{C}_t)}$				0.003 [0.005]
Constant	0.094*** [0.028]	0.050*** [0.015]	0.040** [0.016]	0.142*** [0.025]
Observations	112	112	112	112
R^2	0.12	0.32	0.33	0.00

Figure 12: *Histogram of speed of response*



3.6 Five static factors

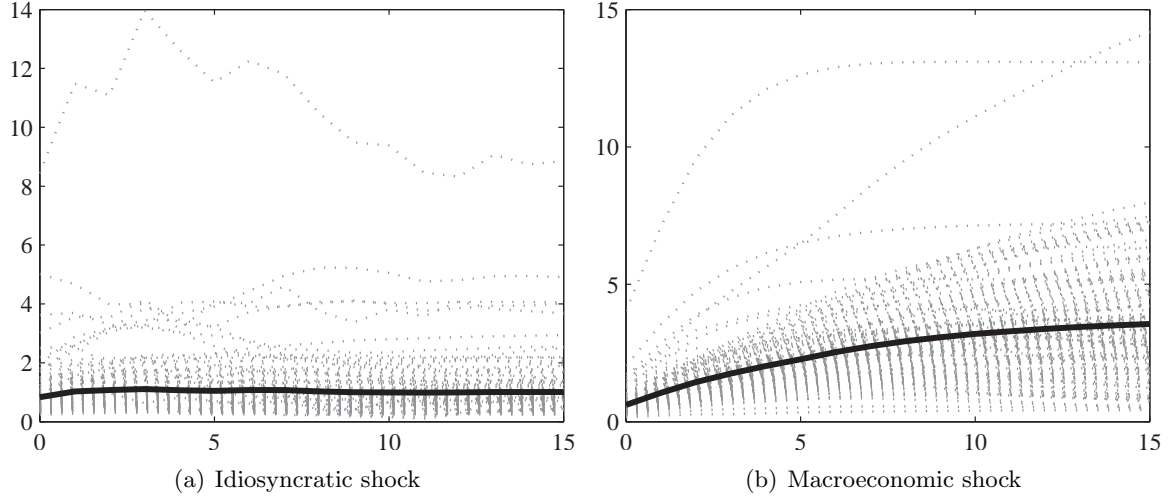
The subsequent specification is again based on quarterly Swiss price data.

Table 33: *Descriptive statistics*

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	$sd(\pi_{it})$	$sd(\boldsymbol{\lambda}_i \mathbf{C}_t)$	$sd(e_{it})$	R^2	$\rho(\pi_{it})$	$\rho(\boldsymbol{\lambda}_i \mathbf{C}_t)$	$\rho(e_{it})$
Aggregate inflation	0.54	0.41	0.36	0.57	0.79	0.91	0.31
Sectoral inflation							
Average	1.05	0.61	0.83	0.41	0.56	0.80	0.13
Median	0.75	0.49	0.59	0.43	0.60	0.83	0.19

Table 34: *Correlation of descriptive statistics*

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	$sd(\pi_{it})$	$sd(\boldsymbol{\lambda}_i \mathbf{C}_t)$	$sd(e_{it})$	$\frac{sd(e_{it})}{sd(\boldsymbol{\lambda}_i \mathbf{C}_t)}$	R^2	FPC_i	$speed_i^{macro}$	$speed_i^{idio}$
$sd(\pi_{it})$	1.00							
$sd(\boldsymbol{\lambda}_i \mathbf{C}_t)$	0.92	1.00						
$sd(e_{it})$	0.99	0.86	1.00					
$\frac{sd(e_{it})}{sd(\boldsymbol{\lambda}_i \mathbf{C}_t)}$	0.30	-0.02	0.39	1.00				
R^2	-0.32	0.00	-0.43	-0.91	1.00			
FPC_i	0.81	0.77	0.80	0.25	-0.27	1.00		
$speed_i^{macro}$	0.44	0.44	0.42	0.36	-0.33	0.30	1.00	
$speed_i^{idio}$	0.09	0.11	0.08	0.10	-0.06	-0.02	0.28	1.00

Figure 13: Impulse responses of sectoral prices

Table 35: Size of response to a macroeconomic shock

$\text{resp}_{i,4}^{\text{macro}}$	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\text{sd}(e_{it})$	0.992*** [0.132]		0.195 [0.147]					
$\text{sd}(\lambda_i \mathbf{C}_t)$		2.265*** [0.242]	1.921*** [0.322]					
$\frac{\text{sd}(e_{it})}{\text{sd}(\lambda_i \mathbf{C}_t)}$				-0.141 [0.136]				-0.454*** [0.096]
FPC_i					6.398*** [1.775]		6.385*** [1.816]	6.990*** [1.770]
Size_i						3.978 [3.317]	0.233 [2.789]	
Constant	0.923*** [0.105]	0.372*** [0.130]	0.419*** [0.111]	1.945*** [0.139]	0.820*** [0.218]	1.378*** [0.308]	0.800*** [0.289]	1.392*** [0.212]
Observations	147	147	147	147	114	114	114	114
R^2	0.66	0.81	0.81	0.01	0.55	0.02	0.55	0.62

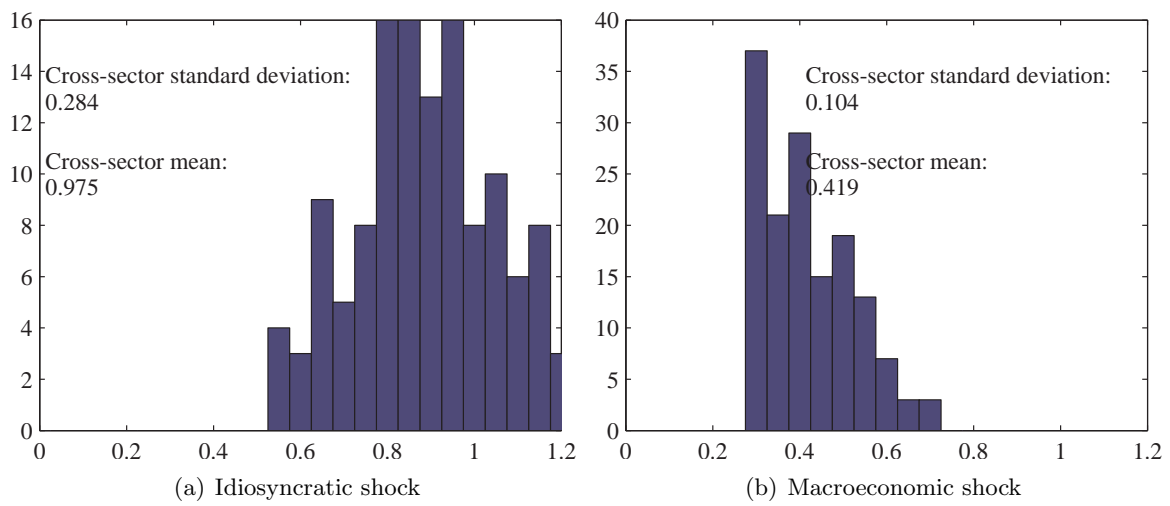
Table 36: *Speed of response to a macroeconomic shock*

$\text{speed}_i^{\text{macro}}$	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\text{sd}(e_{it})$	0.049*** [0.018]		0.018 [0.026]					
$\text{sd}(\lambda_i \mathbf{C}_t)$		0.107*** [0.035]	0.075 [0.052]					
$\frac{\text{sd}(e_{it})}{\text{sd}(\lambda_i \mathbf{C}_t)}$				0.053*** [0.011]				0.061*** [0.012]
FPC_i					0.207*** [0.047]		0.195*** [0.045]	0.128*** [0.036]
Size_i						0.346 [0.222]	0.231 [0.221]	
Constant	0.378*** [0.015]	0.354*** [0.021]	0.358*** [0.022]	0.346*** [0.018]	0.381*** [0.011]	0.378*** [0.024]	0.360*** [0.024]	0.304*** [0.018]
Observations	147	147	147	147	114	114	114	114
R^2	0.18	0.20	0.20	0.13	0.09	0.02	0.10	0.29

Table 37: *Frequency of price changes*

FPC_i	(1)	(2)	(3)	(4)
$\text{sd}(e_{it})$	0.114*** [0.011]		0.079*** [0.022]	
$\text{sd}(\lambda_i \mathbf{C}_t)$		0.245*** [0.024]	0.084 [0.051]	
$\frac{\text{sd}(e_{it})}{\text{sd}(\lambda_i \mathbf{C}_t)}$				0.047** [0.019]
Constant	0.050*** [0.008]	0.006 [0.012]	0.031** [0.015]	0.078*** [0.020]
Observations	114	114	114	114
R^2	0.64	0.60	0.65	0.06

Figure 14: *Histogram of speed of response*



References

- BOIVIN, J., M. P. GIANNONI, AND I. MIHOV (2009): “Sticky Prices and Monetary Policy: Evidence from Disaggregated US Data,” *American Economic Review*, 99, 350–84.
- MACKOWIAK, B., E. MOENCH, AND M. WIEDERHOLT (2009): “Sectoral Price Data and Models of Price Setting,” *Journal of Monetary Economics*, 56, S78–S99.