

Unpublished Online Appendix to What Moves Housing Markets: A Variance Decomposition of the Rent-Price Ratio

In this appendix we present two additional tables to support the robustness of the results reported in the paper.

Table A1 presents the variance decomposition performed in Tables 5 and 6 of the paper for the entire 1975-2007 sample period. The tables in the paper present this decomposition over the 1975-1996 and 1997-2007 sub-periods.

Table A2 compares growth of the tenants' rent index (which was used in the paper) and the owners' equivalent rent index, both from the Bureau of Labor Statistics. Columns (1) and (2) show the average real rate of growth over the 1983-2007 period. Column (3) shows the correlation of the yearly real growth rate of the two indexes.

Appendix Table A1:
Variance Decomposition of the Log Rent-Price Ratio, 1975-2007

	Variance		Variance Shares			Covariance Shares		
	$r - p$	$\widehat{r - p}$	$\widehat{\mathcal{I}}_t$	$\widehat{\Pi}_t$	\mathcal{E}_t	$(\widehat{\mathcal{I}}_t, \widehat{\Pi}_t)$	$(\widehat{\mathcal{I}}_t, \mathcal{E}_t)$	$(\widehat{\Pi}_t, \mathcal{E}_t)$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
USA	0.11	0.05	0.19	0.48	1.26	-0.52	0.58	-0.99
Midwest	0.11	0.05	0.15	0.69	1.03	-0.47	0.54	-0.94
Chicago	0.12	0.08	0.17	0.29	1.00	-0.35	0.50	-0.62
Cincinnati	0.09	0.02	0.32	0.36	0.80	-0.56	0.70	-0.62
Cleveland	0.09	0.03	0.40	0.21	0.68	-0.28	0.19	-0.20
Detroit	0.21	0.11	0.04	0.35	0.82	-0.03	0.15	-0.33
Kansas City	0.09	0.07	0.36	0.86	1.21	-1.06	0.90	-1.27
Milwaukee	0.16	0.07	0.09	0.22	0.87	-0.22	0.42	-0.37
Minneapolis	0.18	0.06	0.06	0.14	1.13	-0.18	0.38	-0.53
St. Louis	0.13	0.04	0.16	0.29	1.06	-0.40	0.63	-0.74
Northeast	0.17	0.15	0.08	0.85	1.61	0.21	-0.18	-1.58
Boston	0.24	0.16	0.03	0.77	0.85	0.21	-0.05	-0.81
New York	0.27	0.13	0.05	0.32	1.64	0.10	-0.14	-0.97
Philadelphia	0.16	0.06	0.13	0.31	1.32	0.09	-0.04	-0.80
Pittsburgh	0.10	0.03	0.19	0.12	0.45	0.02	0.22	0.00
South	0.09	0.04	0.20	0.51	1.32	-0.63	0.45	-0.84
Atlanta	0.10	0.03	0.19	0.25	0.75	-0.30	0.39	-0.28
Dallas	0.09	0.06	0.33	1.49	0.97	-1.31	0.42	-0.90
Houston	0.11	0.08	0.21	1.56	1.26	-1.10	0.61	-1.54
Miami	0.24	0.13	0.03	0.39	1.97	-0.13	0.23	-1.48
West	0.17	0.11	0.09	0.58	1.85	-0.42	0.43	-1.53
Denver	0.14	0.06	0.10	0.64	1.46	-0.32	0.47	-1.35
Honolulu	0.23	0.05	0.10	0.17	1.23	-0.12	0.08	-0.47
Los Angeles	0.24	0.20	0.05	0.97	1.52	-0.18	0.20	-1.57
Portland	0.24	0.07	0.04	0.21	1.39	-0.17	0.32	-0.79
San Diego	0.22	0.14	0.05	0.61	1.05	-0.18	0.30	-0.83
San Francisco	0.25	0.14	0.04	0.34	1.18	-0.15	0.23	-0.65
Seattle	0.25	0.07	0.03	0.30	1.46	-0.19	0.29	-0.89
Metro Median	0.16	0.07	0.10	0.32	1.13	-0.18	0.30	-0.79

Appendix Table A2:
A Comparison of Tenants' Rent and Owners' Equivalent Rent, 1983-2007

	Annual percent changes (real)		
	Average Growth Rate		Correlation, Yearly Growth
	Tenants' Rent	Owners' Equivalent Rent	
	(1)	(2)	(3)
Chicago	1.30	1.25	0.75
Cincinnati	0.34	0.29	0.65
Cleveland	0.40	0.37	0.83
Detroit	0.37	0.51	0.66
Kansas City	0.39	0.21	0.80
Milwaukee	0.37	0.85	0.63
Minneapolis	0.22	0.45	0.93
St. Louis	-0.01	0.45	0.66
New York City	1.68	1.88	0.64
Philadelphia	1.13	1.53	0.79
Boston	1.47	1.52	0.93
Pittsburgh	0.14	0.52	0.63
Atlanta	0.50	0.42	0.93
Dallas	-0.31	-0.11	0.93
Houston	-0.31	-0.32	0.91
Miami	0.75	0.90	0.92
Denver	0.18	0.25	0.96
Honolulu	1.16	1.45	0.92
Los Angeles	1.43	1.46	0.92
Portland	0.60	0.95	0.87
San Diego	1.67	1.92	0.94
San Francisco	1.61	1.46	0.98
Seattle	0.93	1.21	0.89

Source: Bureau of Labor Statistics.