

PHILADELPHIA HOUSE PRICE INDICES

July 20, 2017



DREXEL UNIVERSITY
Lindy Institute
for Urban Innovation

KEVIN C. GILLEN, Ph.D.

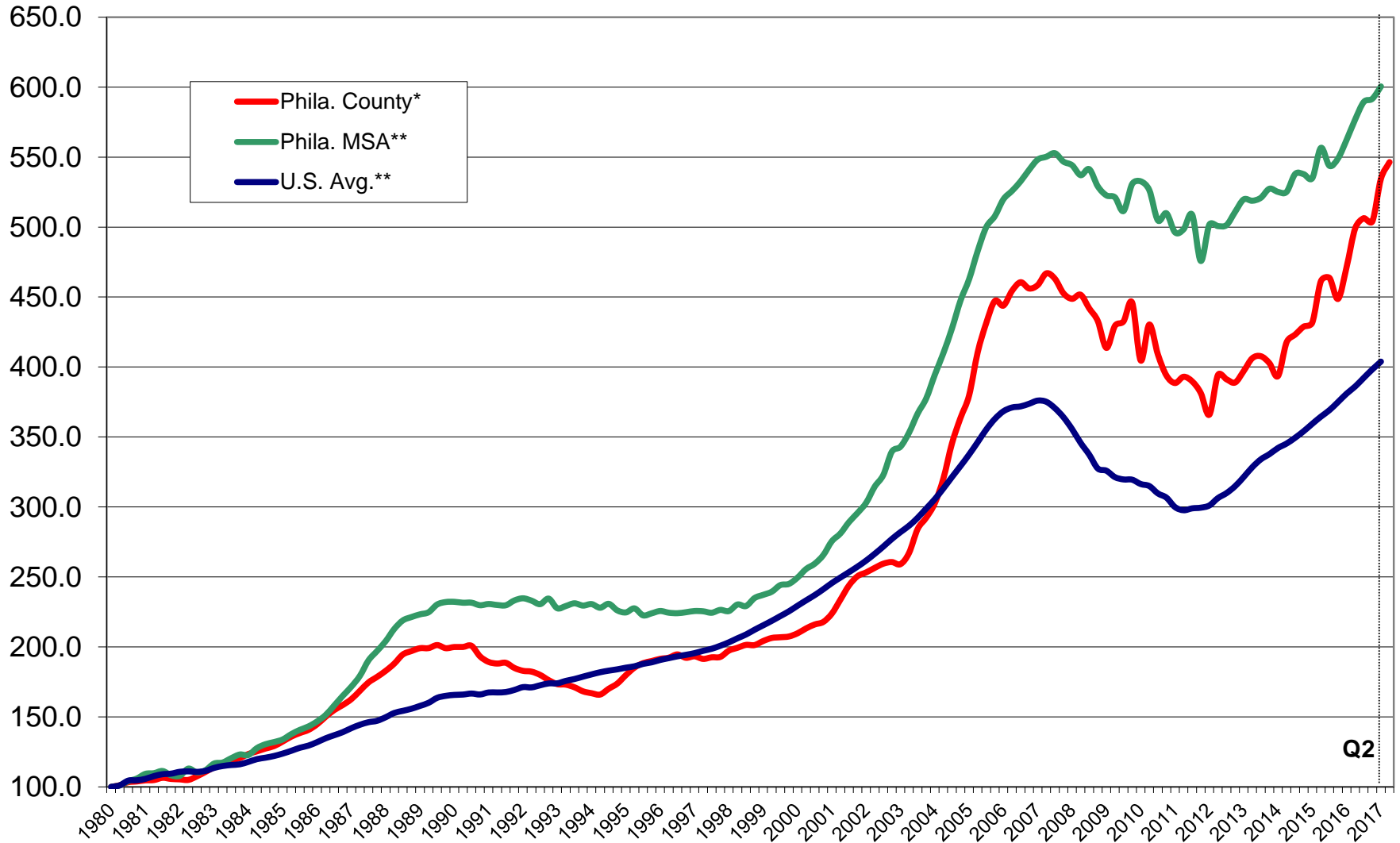
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***Disclaimers and Acknowledgments:** The Lindy Institute for Urban Innovation at Drexel University provides this report free of charge to the public. The report is produced by Kevin C. Gillen Ph.D.. The author thanks Azavea.com, the Philadelphia Office of Property Assessment, the Federal Housing Finance Agency, Case-Shiller MacroMarkets LLC, RealtyTrac, Zillow.com, Trulia.com and the NAHB for making their data publicly available. © 2016, Drexel University, All Rights Reserved.*



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House Price Indices 1980-2017: 1980Q1=100 Philadelphia County v. Philadelphia MSA and U.S. Average



* Empirically estimated by Kevin C. Gillen, Ph.D.

**Courtesy of the Federal Housing Finance Agency (FHFA).

These HPIs are current through 2016Q4 only.

“MSA”=Metropolitan Statistical Area, which is the entire 10-county region.

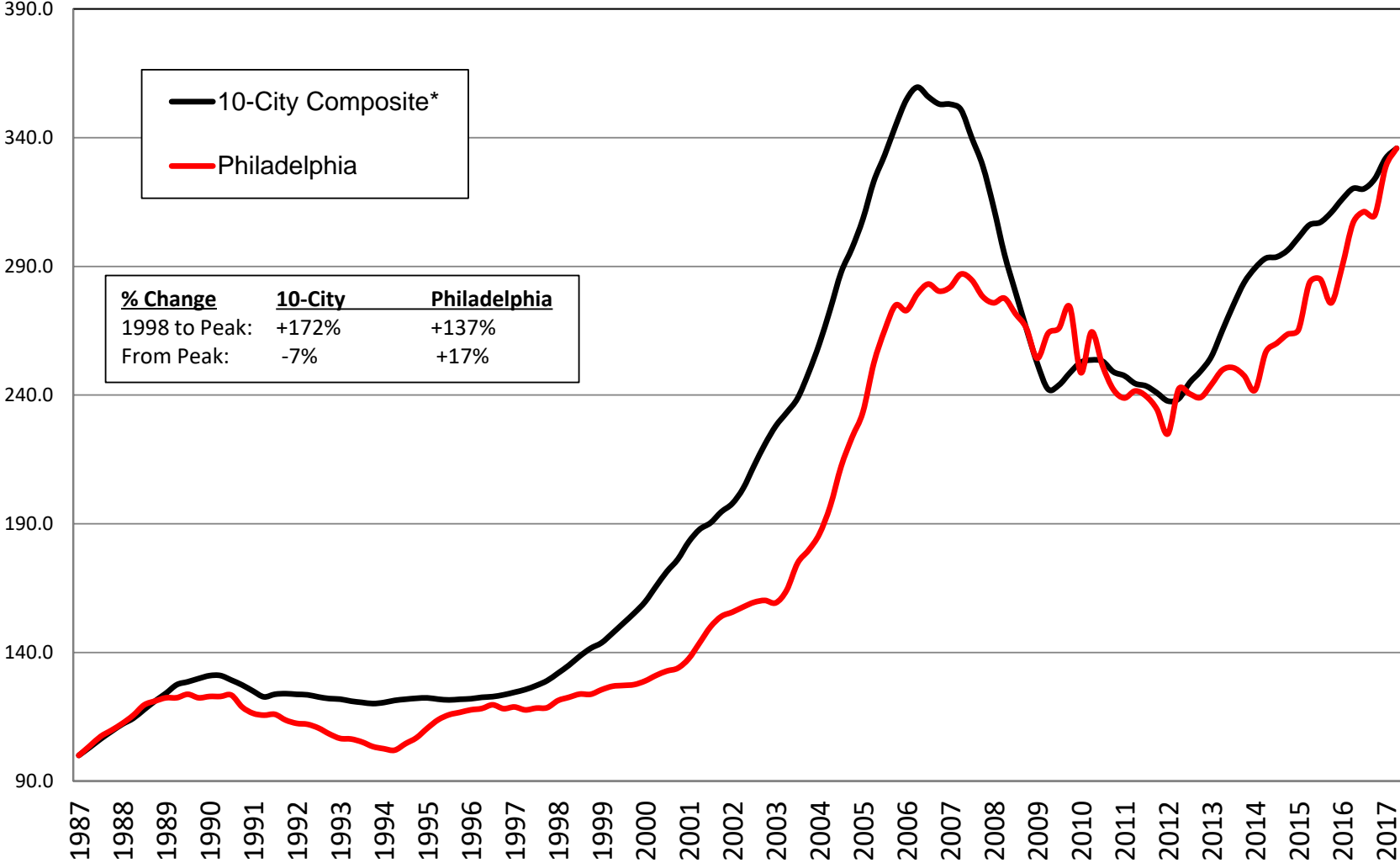
Total House Price Appreciation Rates by Geographic Market

Period	Philadelphia County*	Philadelphia MSA**	U.S.A.**
38-Year	169.8%	179.3%	139.6%
10-Year	15.7%	9.1%	7.1%
1-Year	9.0%	6.6%	5.8%
1-Quarter	3.2%	1.5%	1.4%

*Empirically estimated by Kevin C. Gillen Ph.D.

**Source: U.S. Federal Housing Finance Agency (FHFA). These numbers are through 2017Q1 only. “MSA”=“Metropolitan Statistical Area”, which is the entire 10-county region.

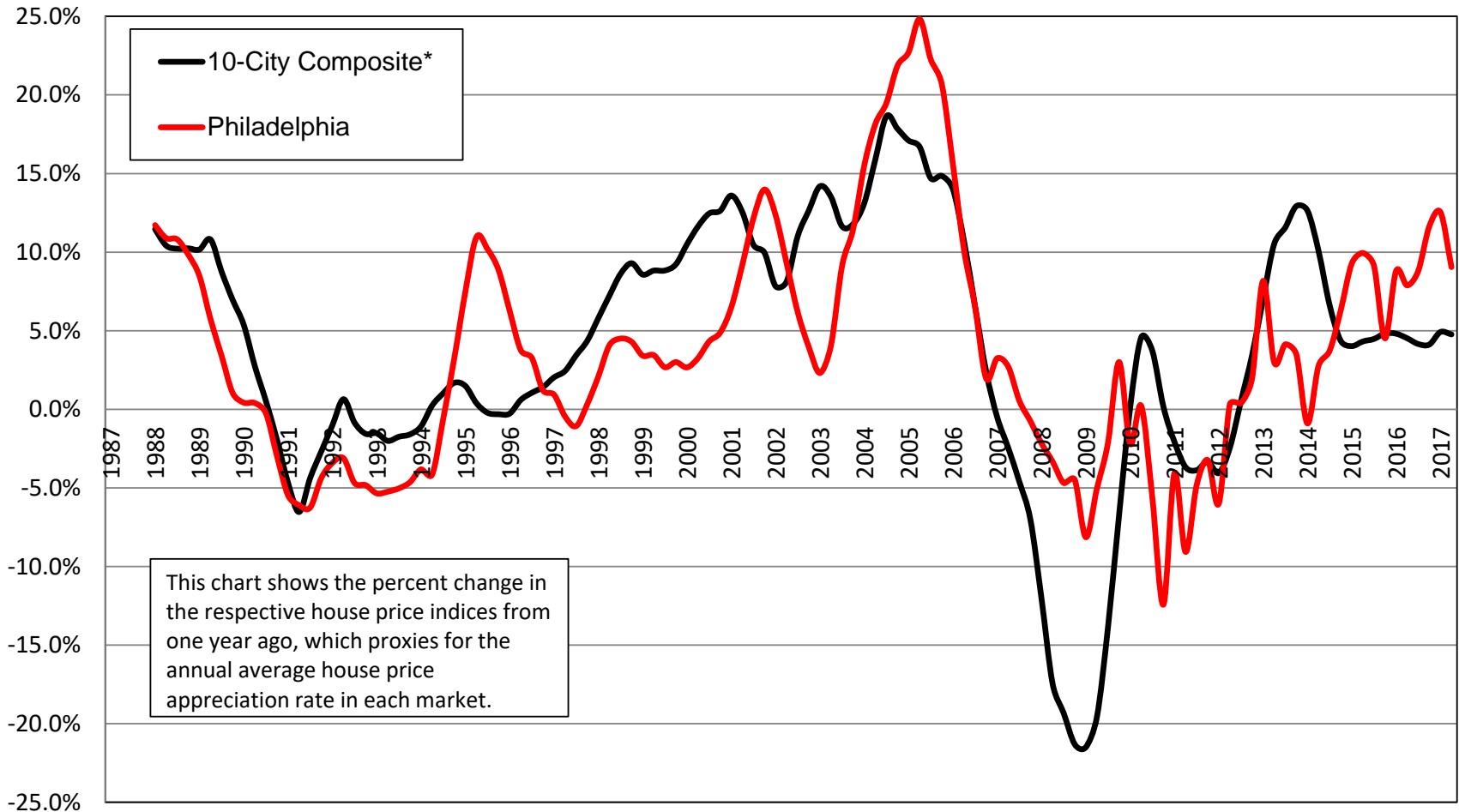
House Price Appreciation 1987-2017: Philadelphia v. 10-City Composite



*Source: S&P/Case-Shiller. The 10-City Composite index includes Boston, Chicago, Denver, Las Vegas, Los Angeles, Miami, New York, San Diego, San Francisco, and Washington, DC. It does not include Philadelphia.



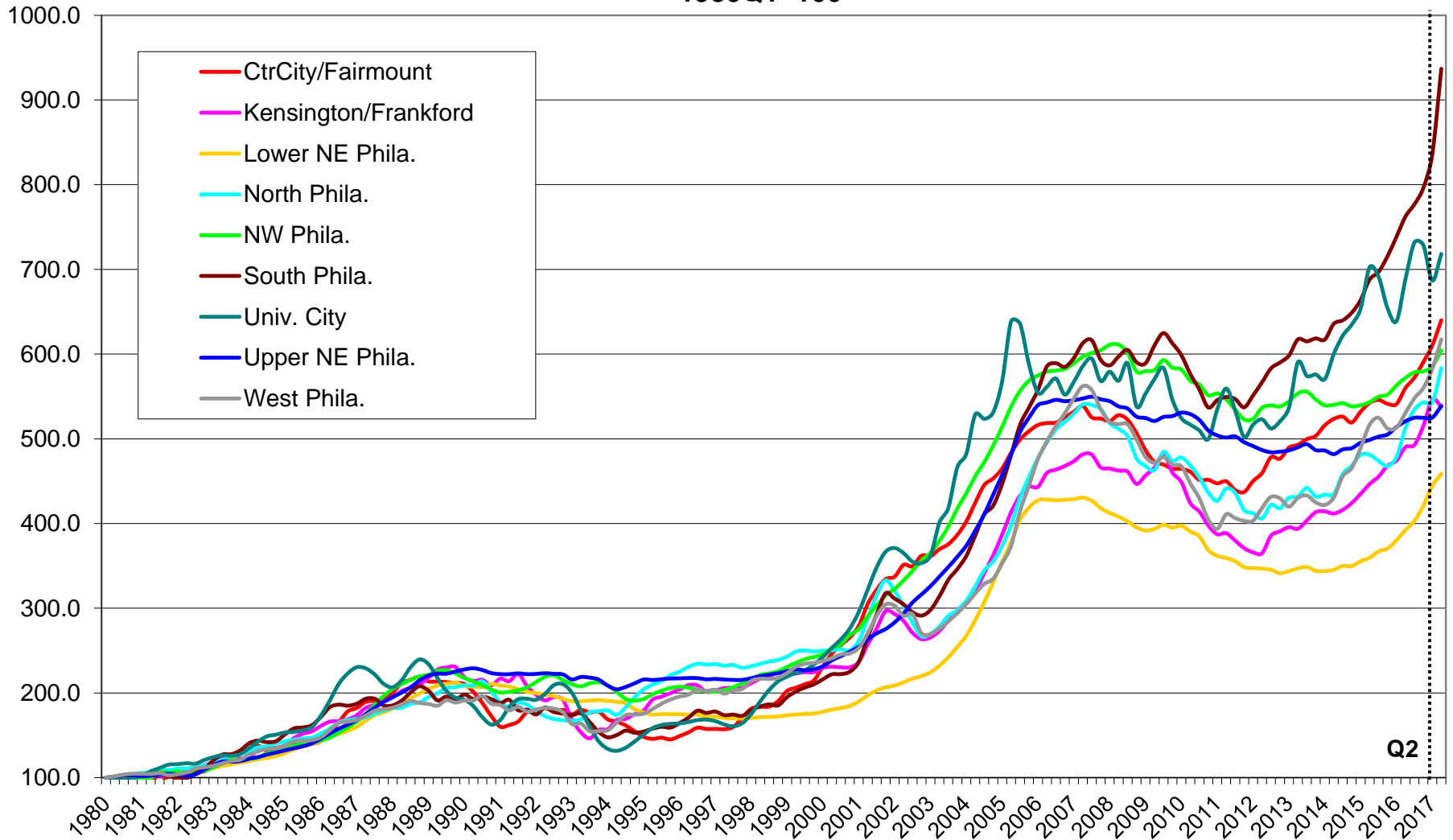
YoY House Price Change (%) 1987-2017: Philadelphia v. 10-City Composite



*Source: S&P/Case-Shiller. The 10-City Composite index includes Boston, Chicago, Denver, Las Vegas, Los Angeles, Miami, New York, San Diego, San Francisco, and Washington, DC. It does not include Philadelphia.

Philadelphia House Price Indices by Neighborhood: 1980-2017

1980Q1=100



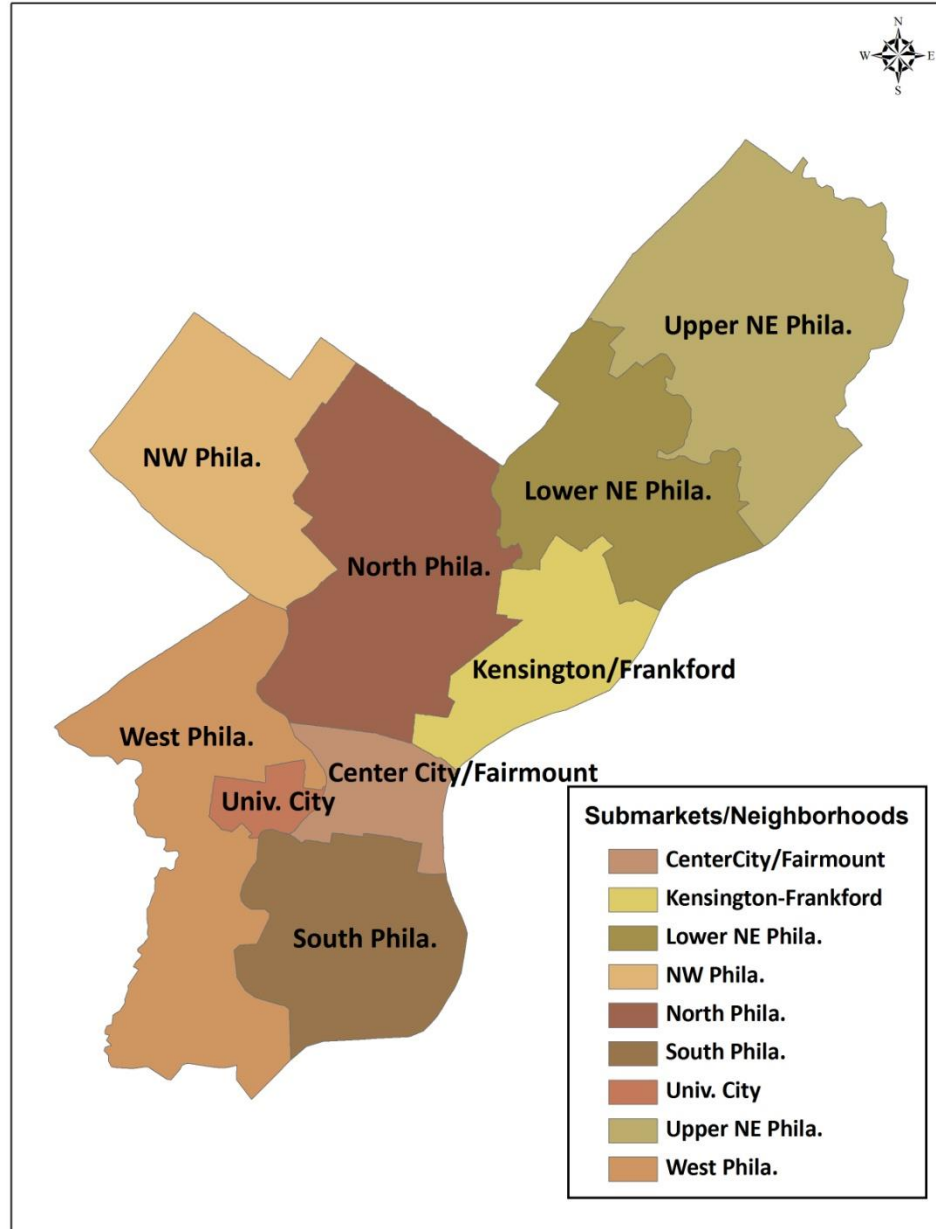
* All indices empirically estimated by Kevin C. Gillen, Ph.D.

Philadelphia House Price Appreciation Rates by Neighborhood

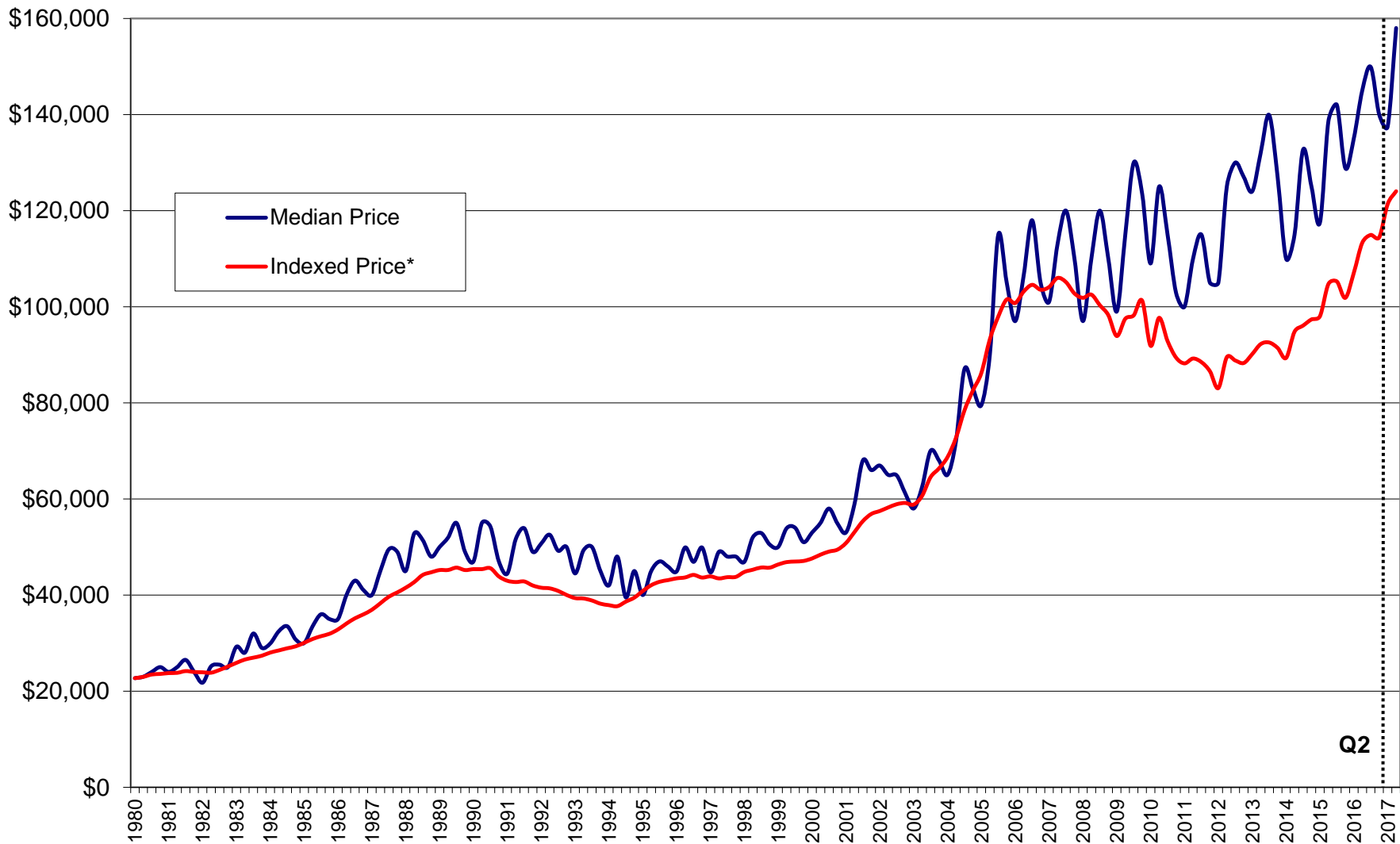
Period	Center City/ Fairmount	Kensington /Frankford	Lower NE Phila.	North Phila.	NW Phila.	South Phila.	Univ. City	Upper NE Phila.	West Phila.
38-year	185.6%	168.3%	152.3%	176.4%	179.9%	223.7%	197.2%	168.4%	182.0%
10-year	17.2%	11.1%	6.3%	7.7%	1.3%	42.4%	20.4%	-1.6%	9.4%
1-Year	13.4%	9.3%	15.6%	12.9%	5.5%	20.6%	4.2%	3.4%	15.2%
1-Quarter	4.7%	-1.5%	3.1%	5.2%	3.2%	7.4%	3.5%	2.6%	4.8%

This table gives the total % change in average house values by neighborhood, through 2017 Q2, from different starting points in time.

Philadelphia Submarket Boundaries



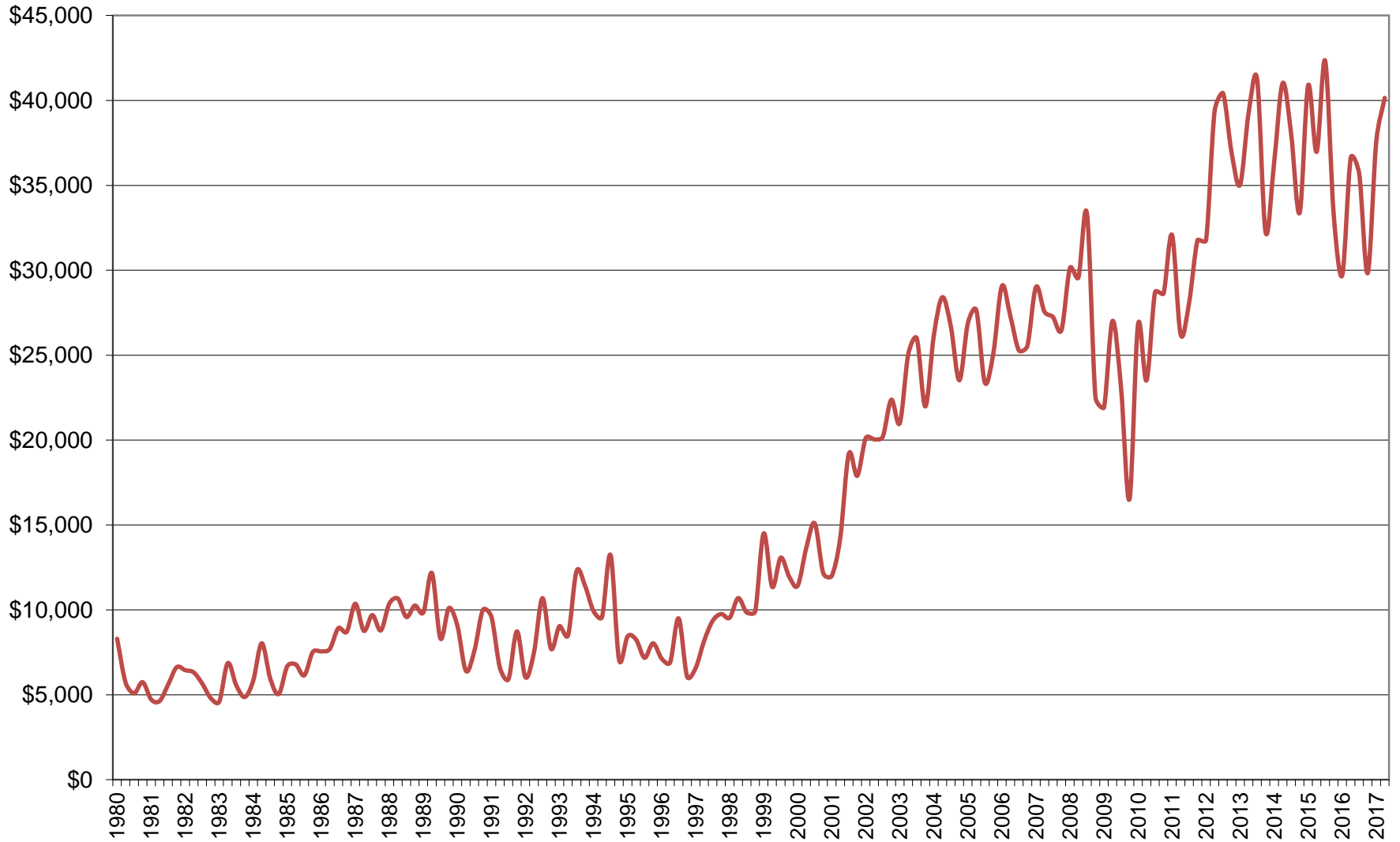
Median Philadelphia House Price v. Indexed Philadelphia House Price 1980-2017



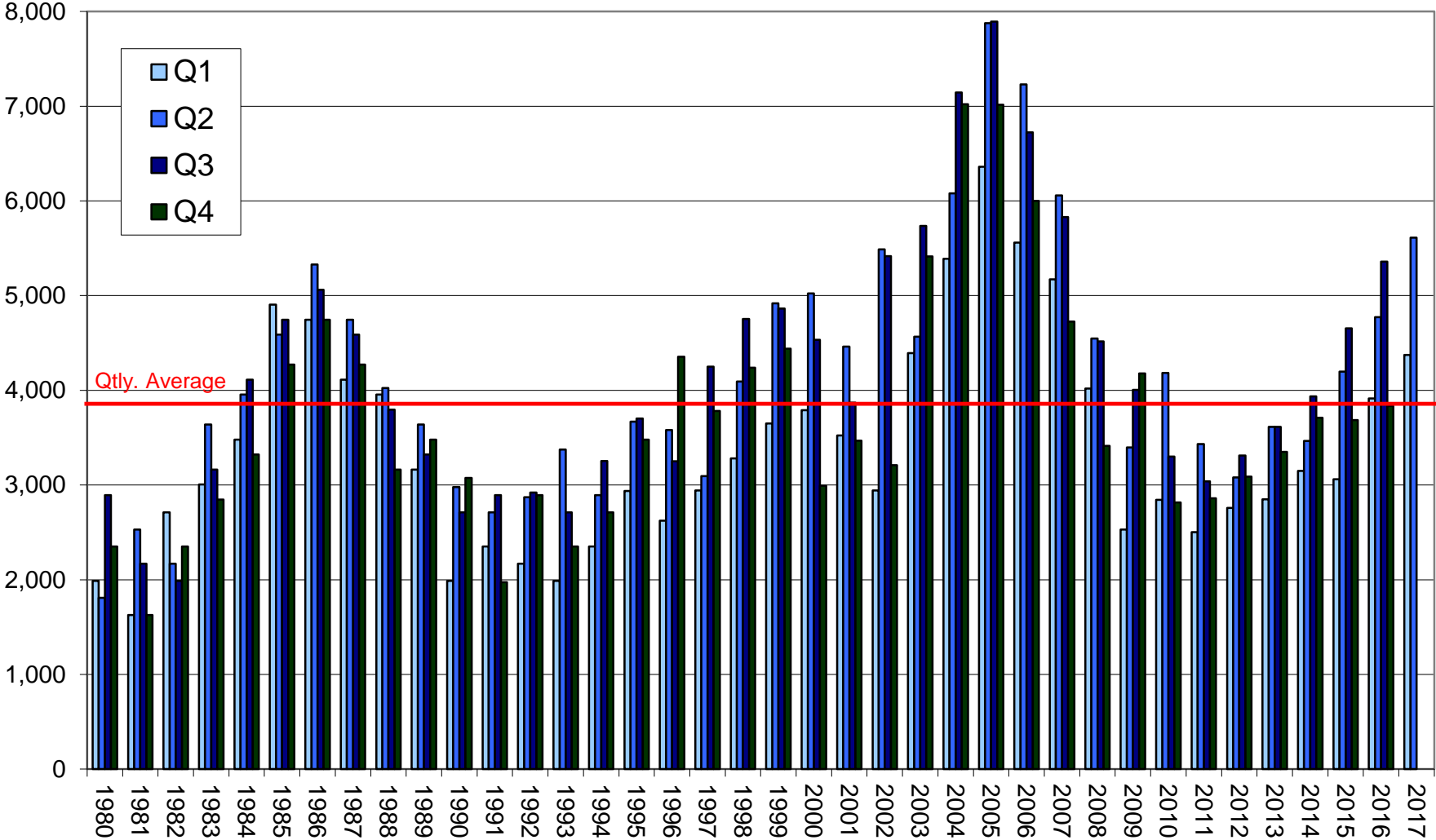
* Empirically estimated by Kevin C. Gillen, PhD

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Average House Price Minus Median House Price: 1980-2017



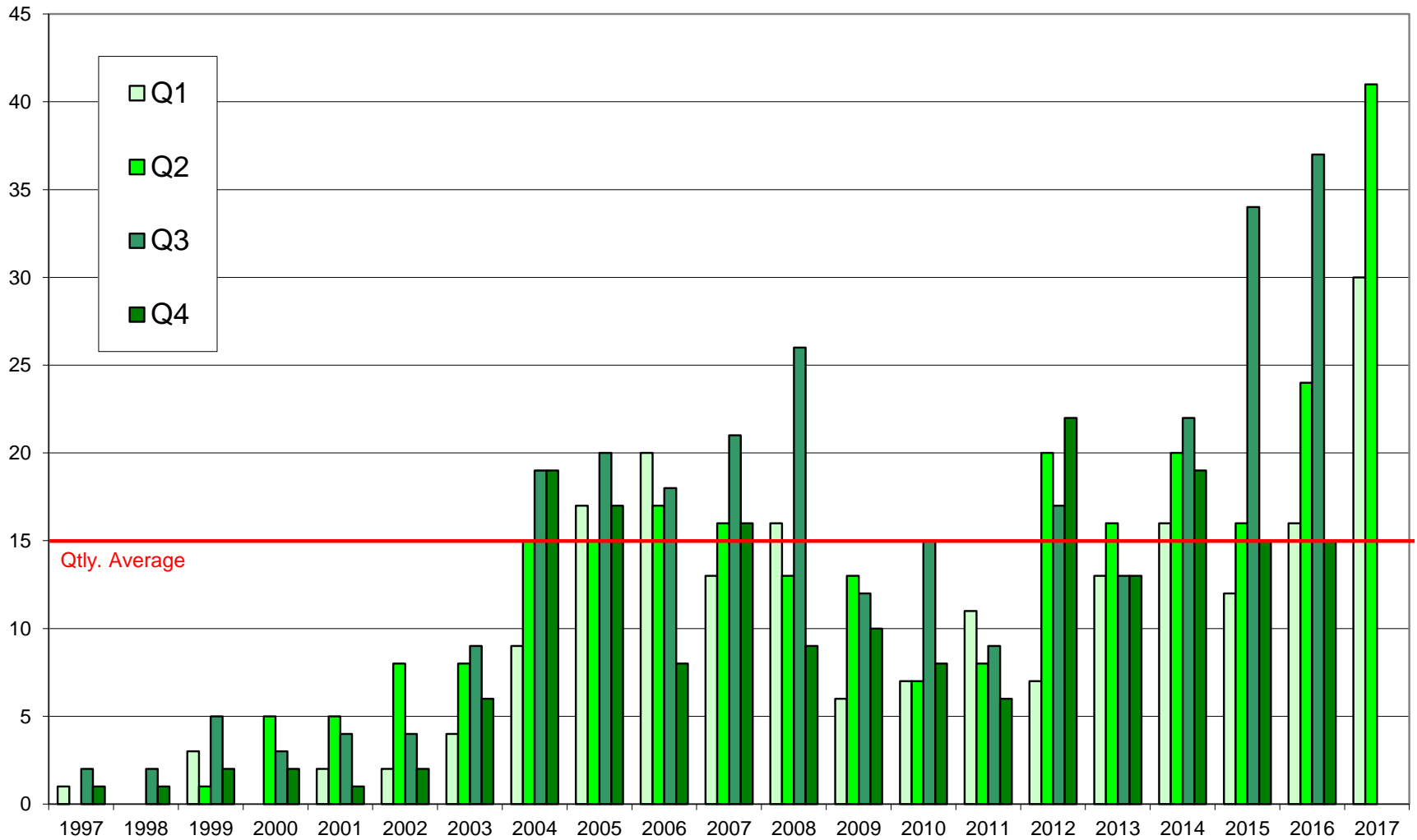
Number of Philadelphia House Sales* per Quarter: 1980-2017



Qtly. Average

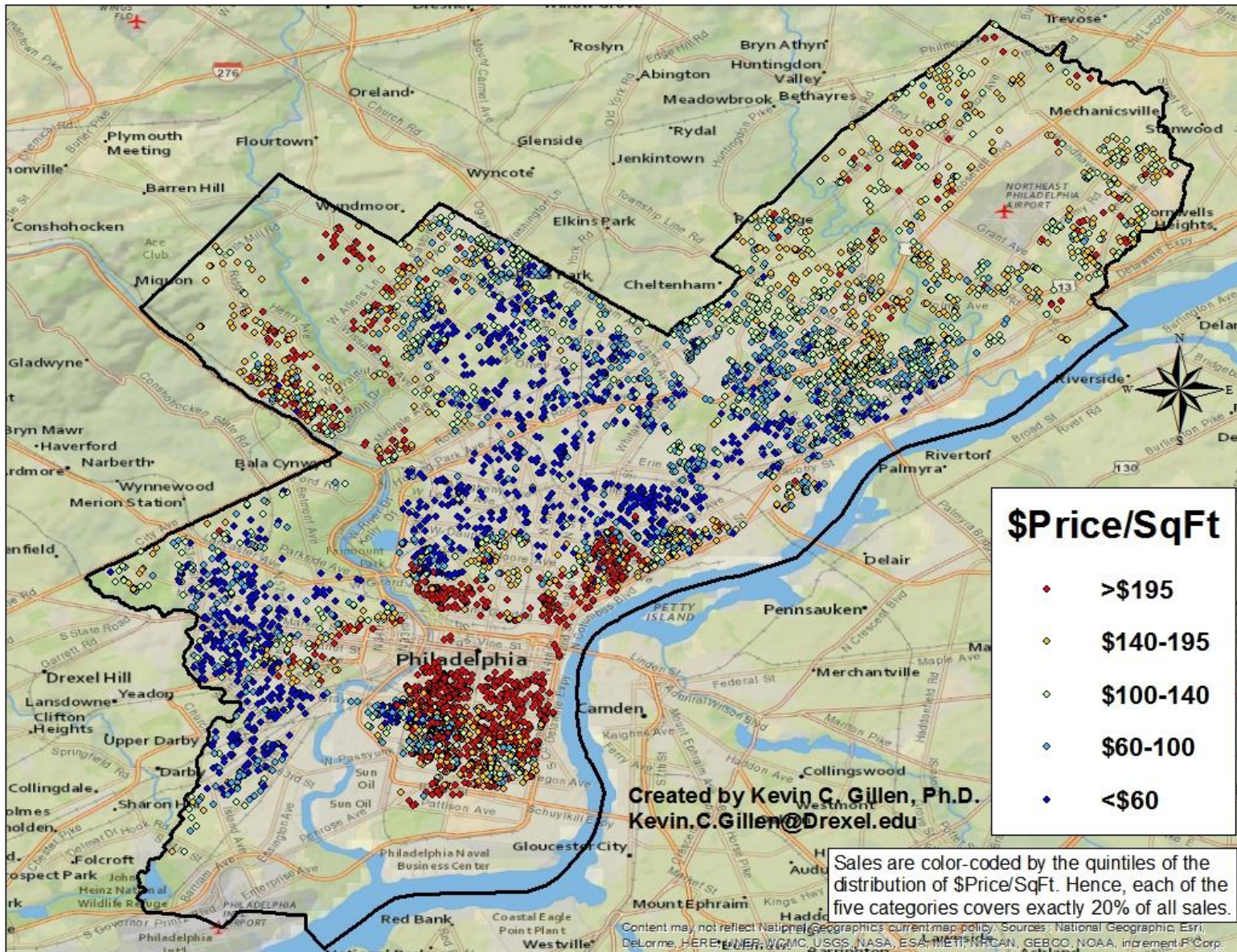
*Only arms-length transactions between private sector entities were included in these numbers.

Number of Philadelphia Home Sales* per Quarter with Price >=\$1 Million: 1997-2017

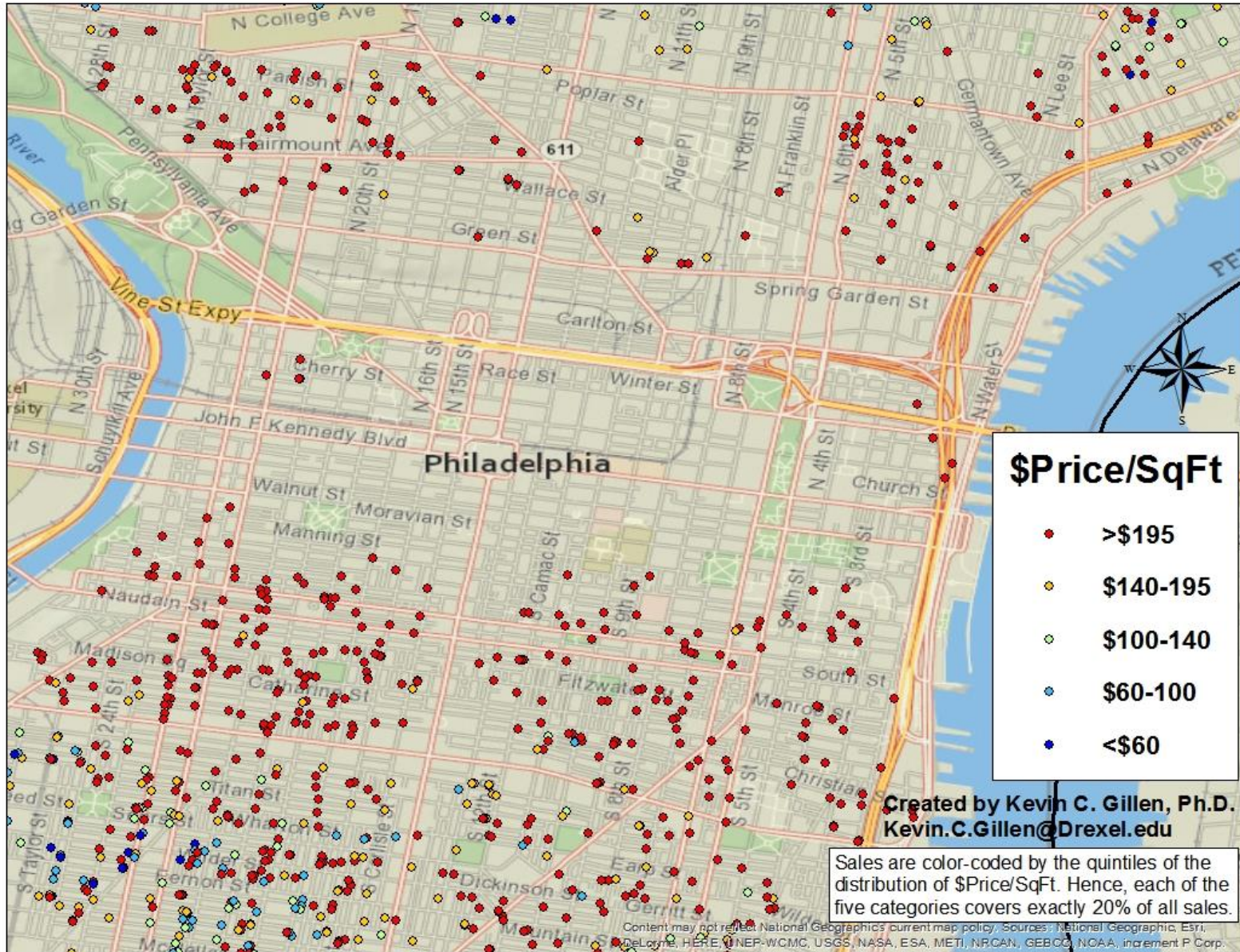


*Only arms-length transactions between private sector entities were included in these numbers.

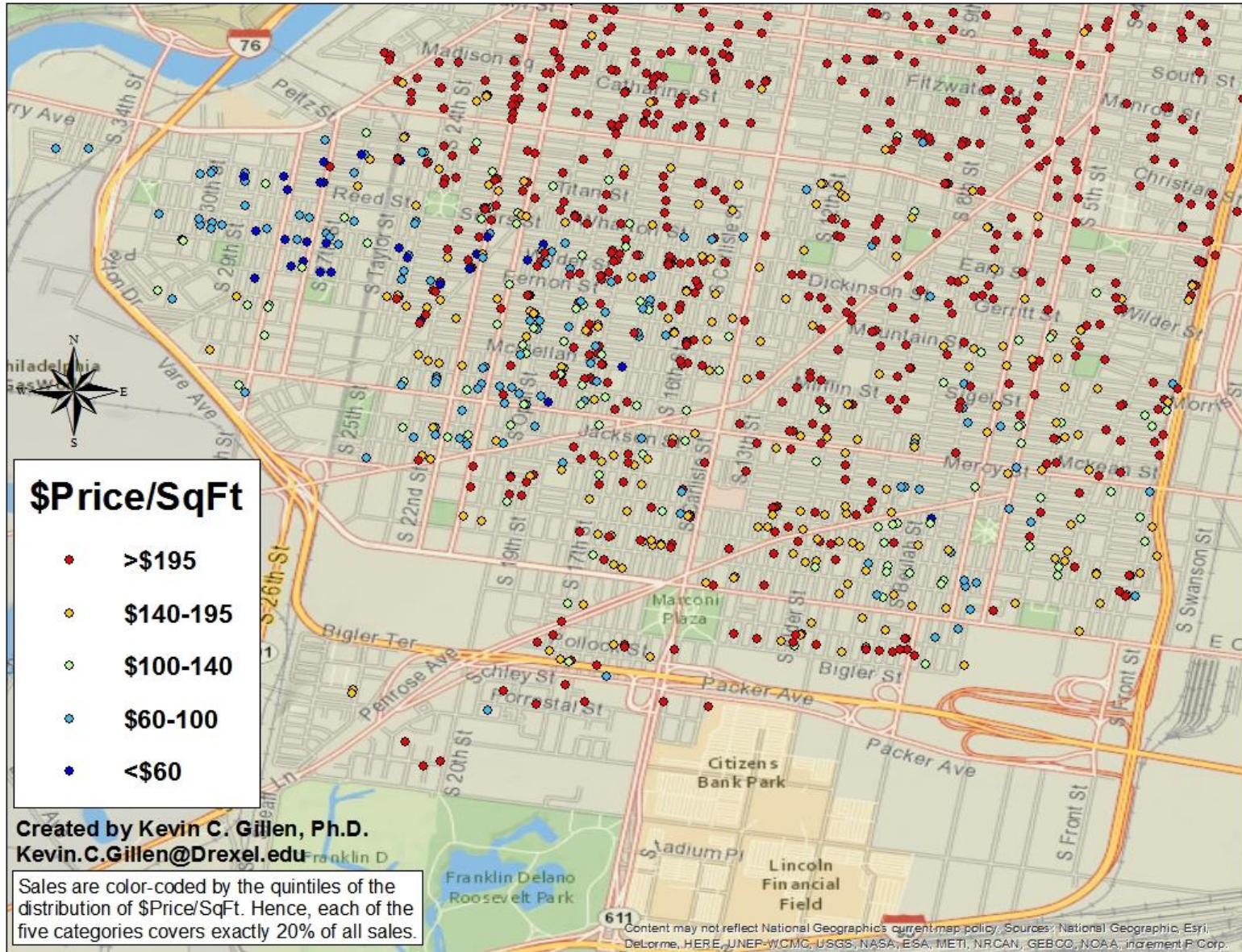
Philadelphia House Sales in 2017 Q2



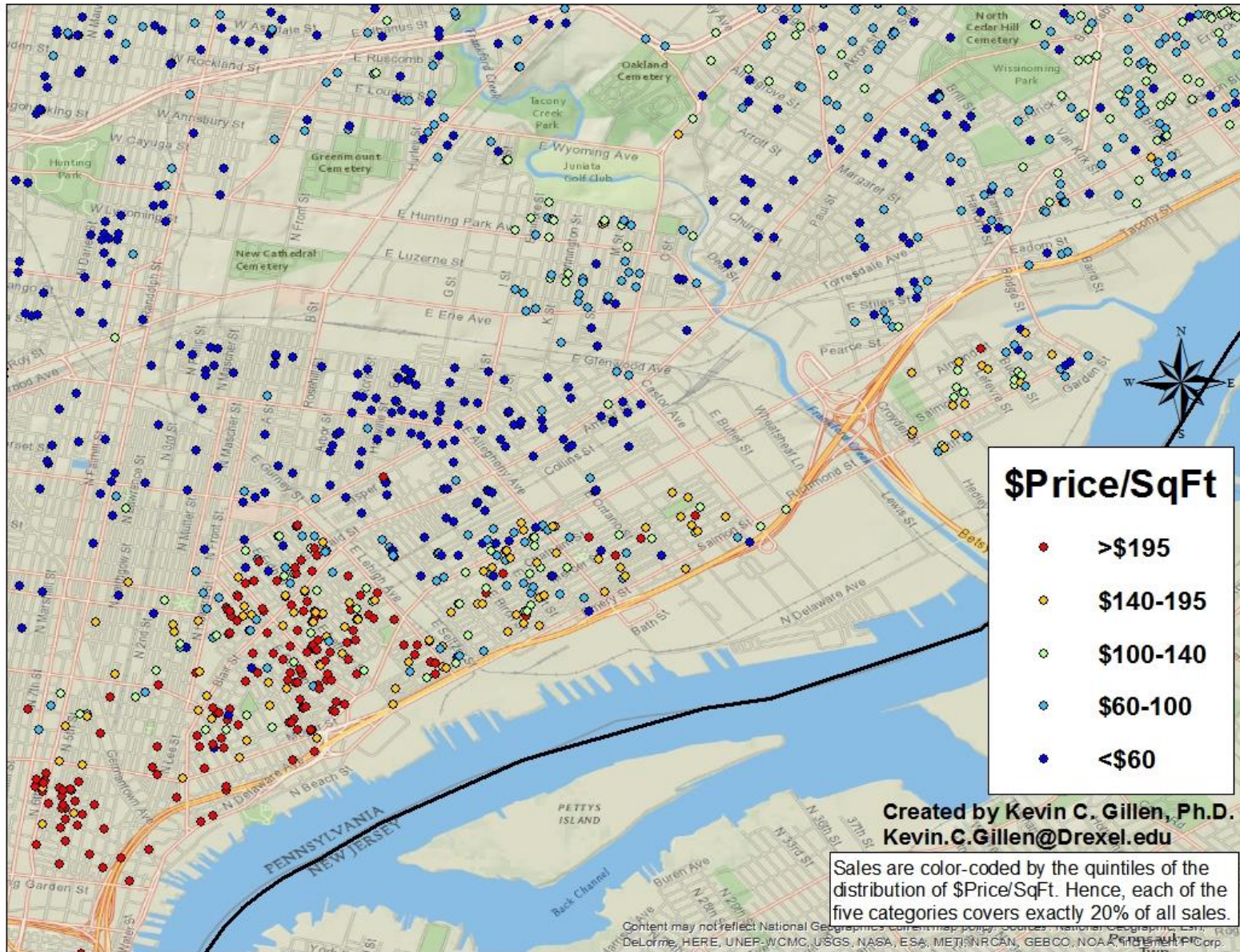
Center City House Sales in 2017 Q2



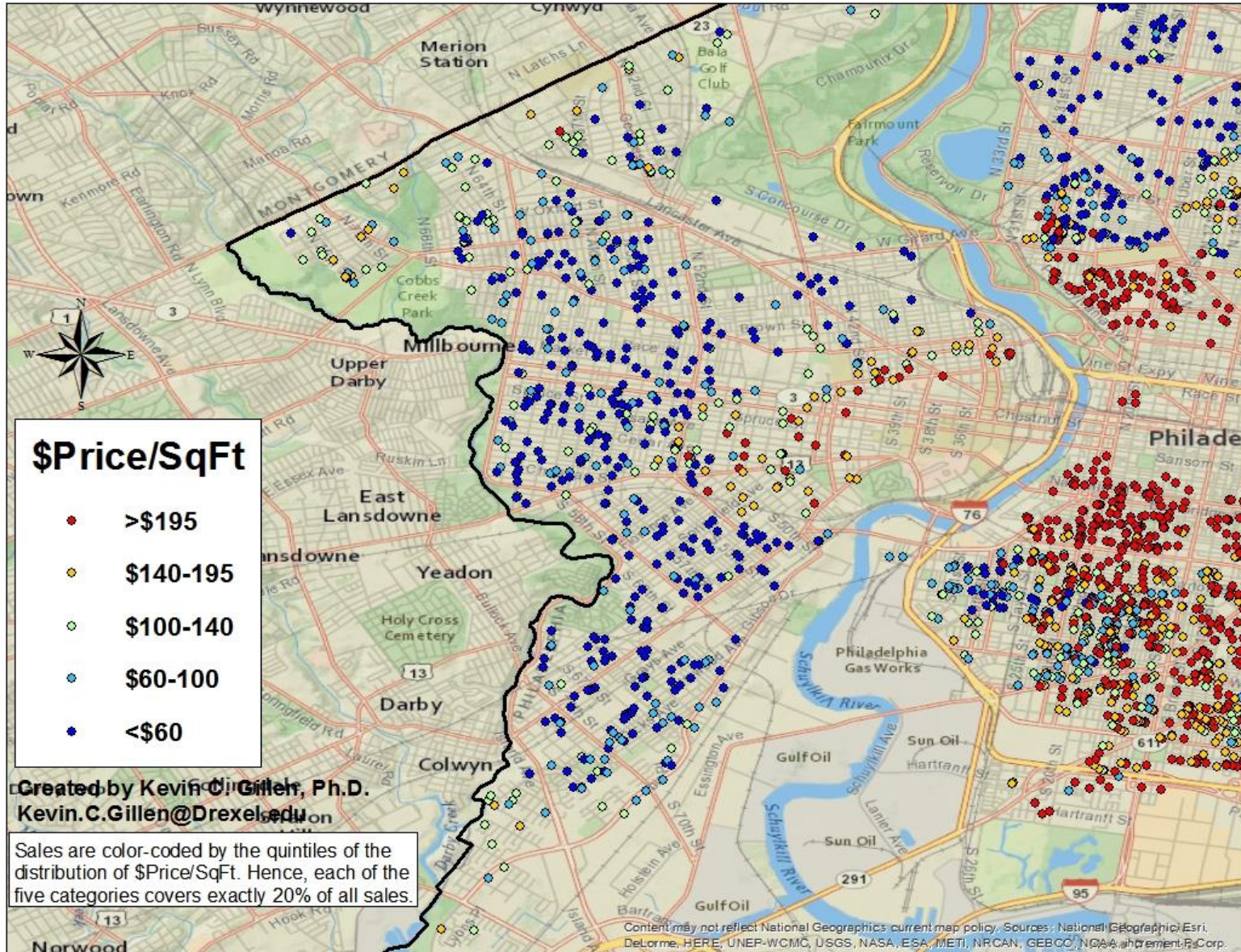
South Philadelphia House Sales in 2017 Q2



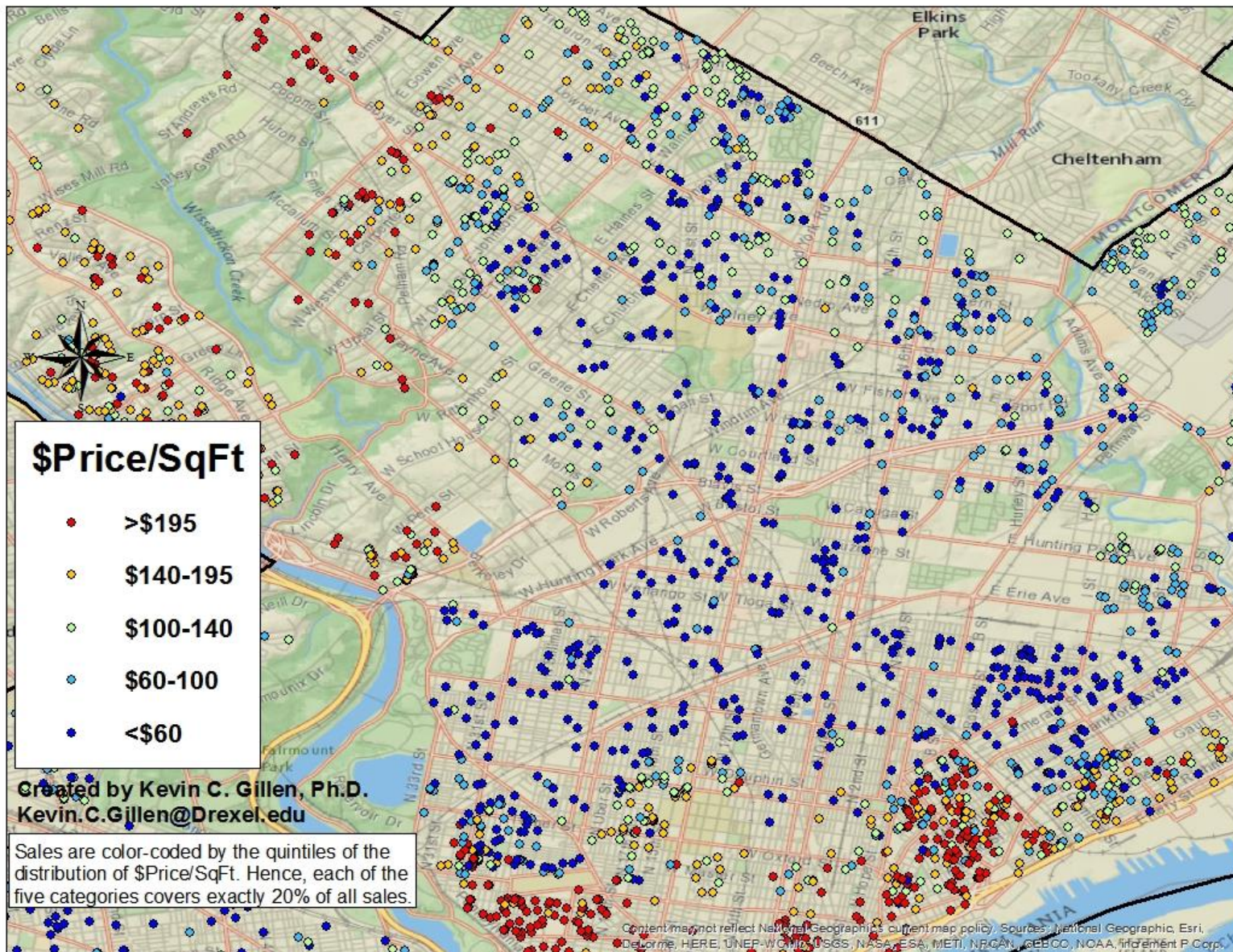
Kensington/Frankford House Sales in 2017 Q2



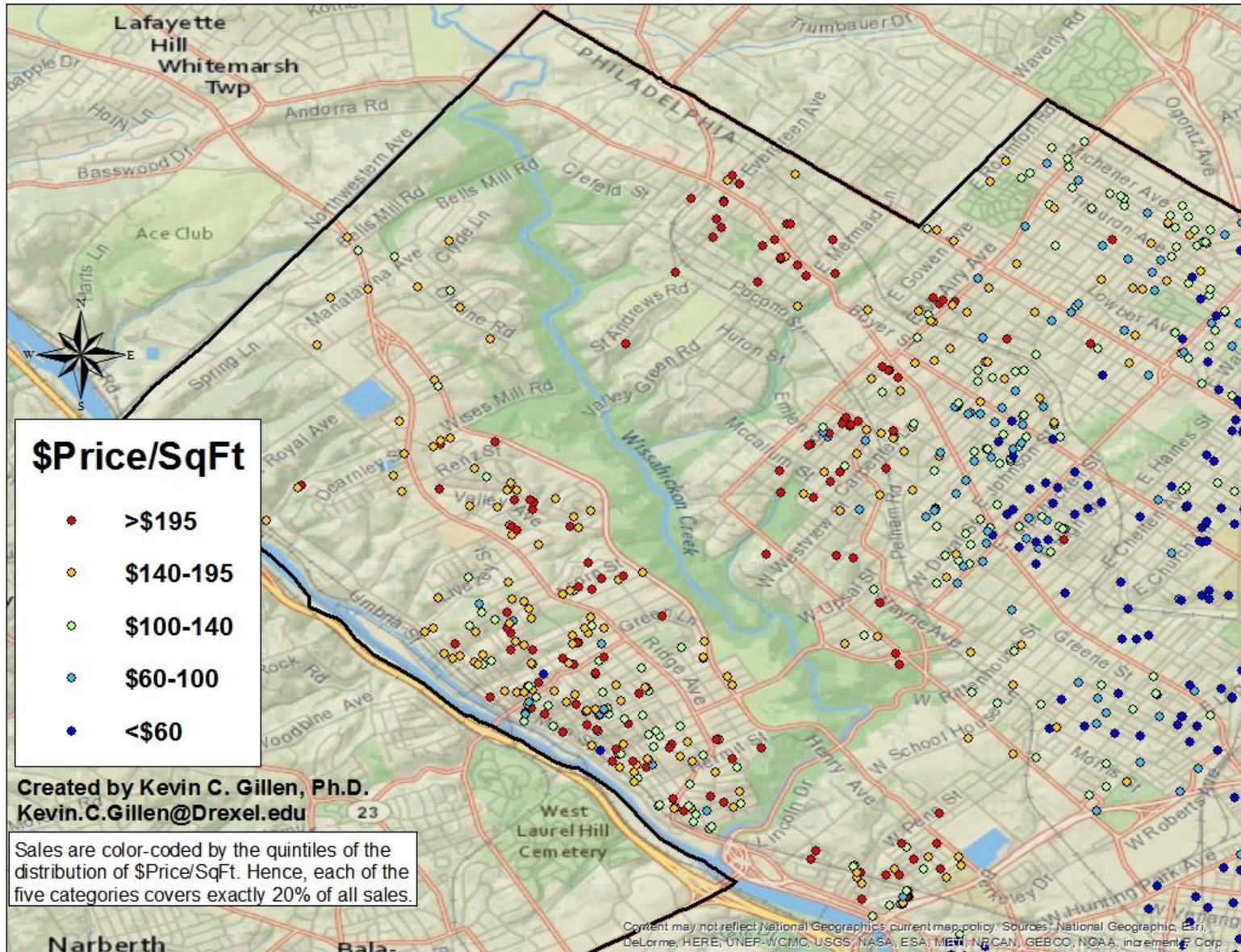
West Philadelphia House Sales in 2017 Q2



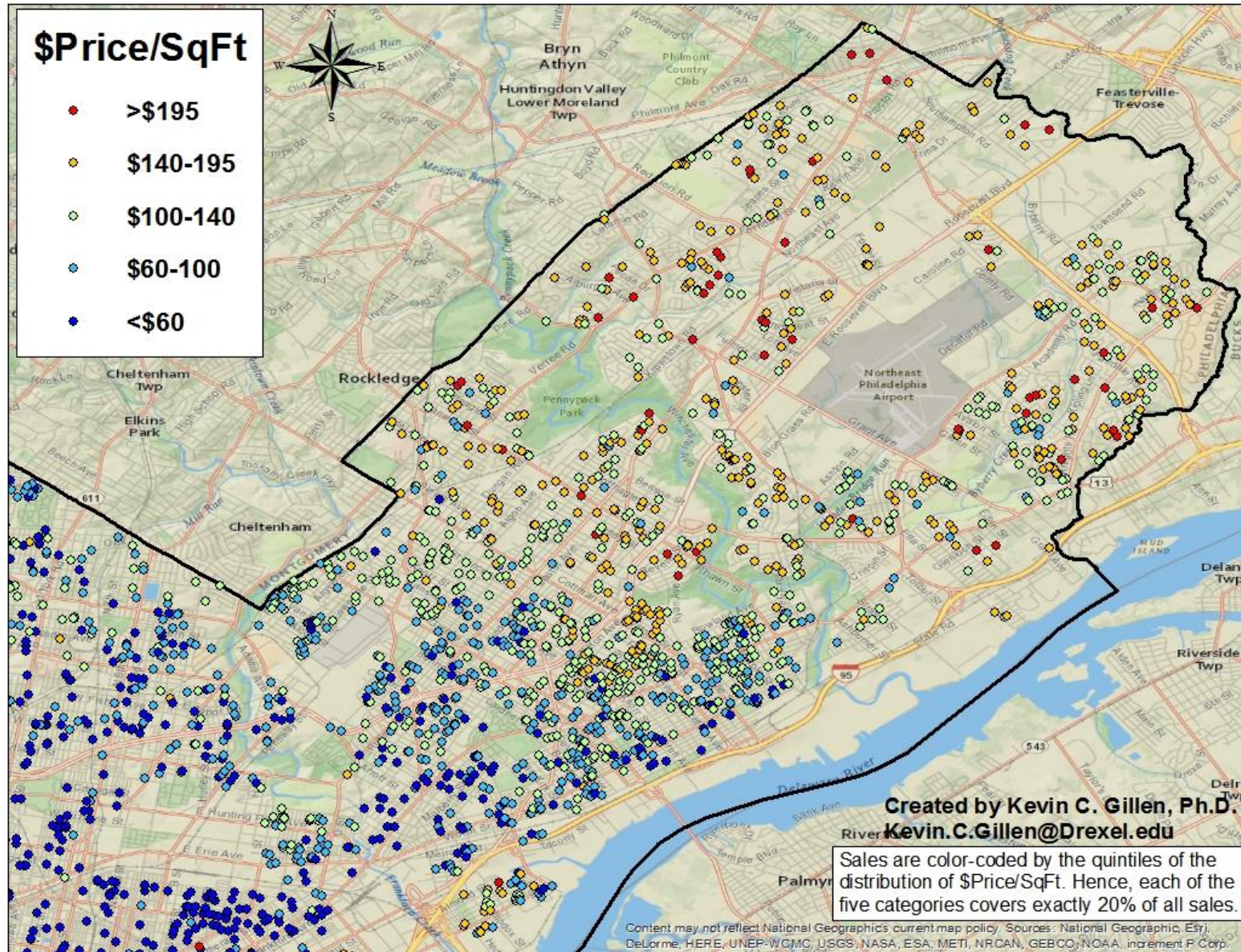
North Philadelphia House Sales in 2017 Q2



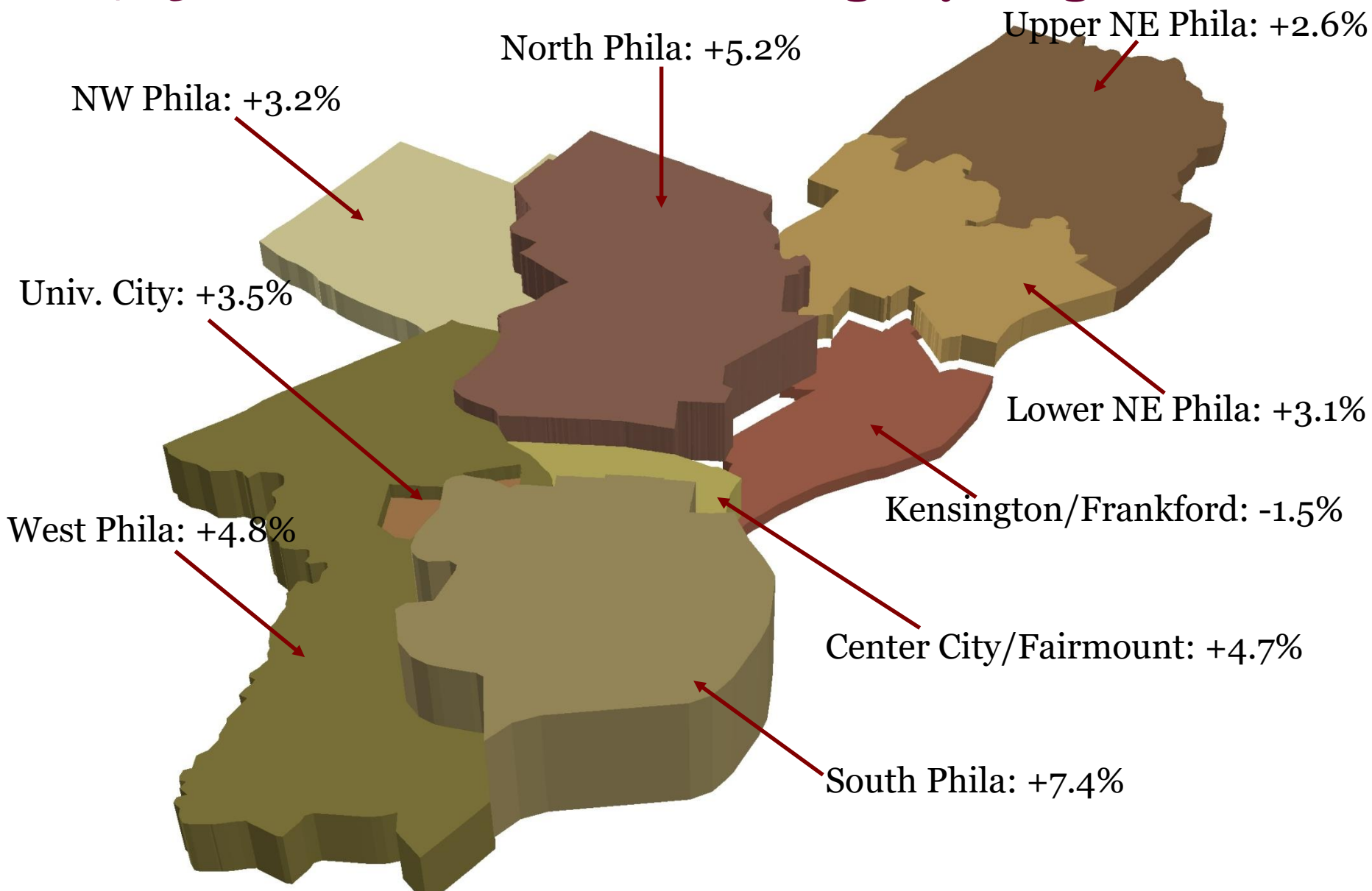
Northwest Philadelphia House Sales in 2017 Q2



Northeast Philadelphia House Sales in 2017 Q2

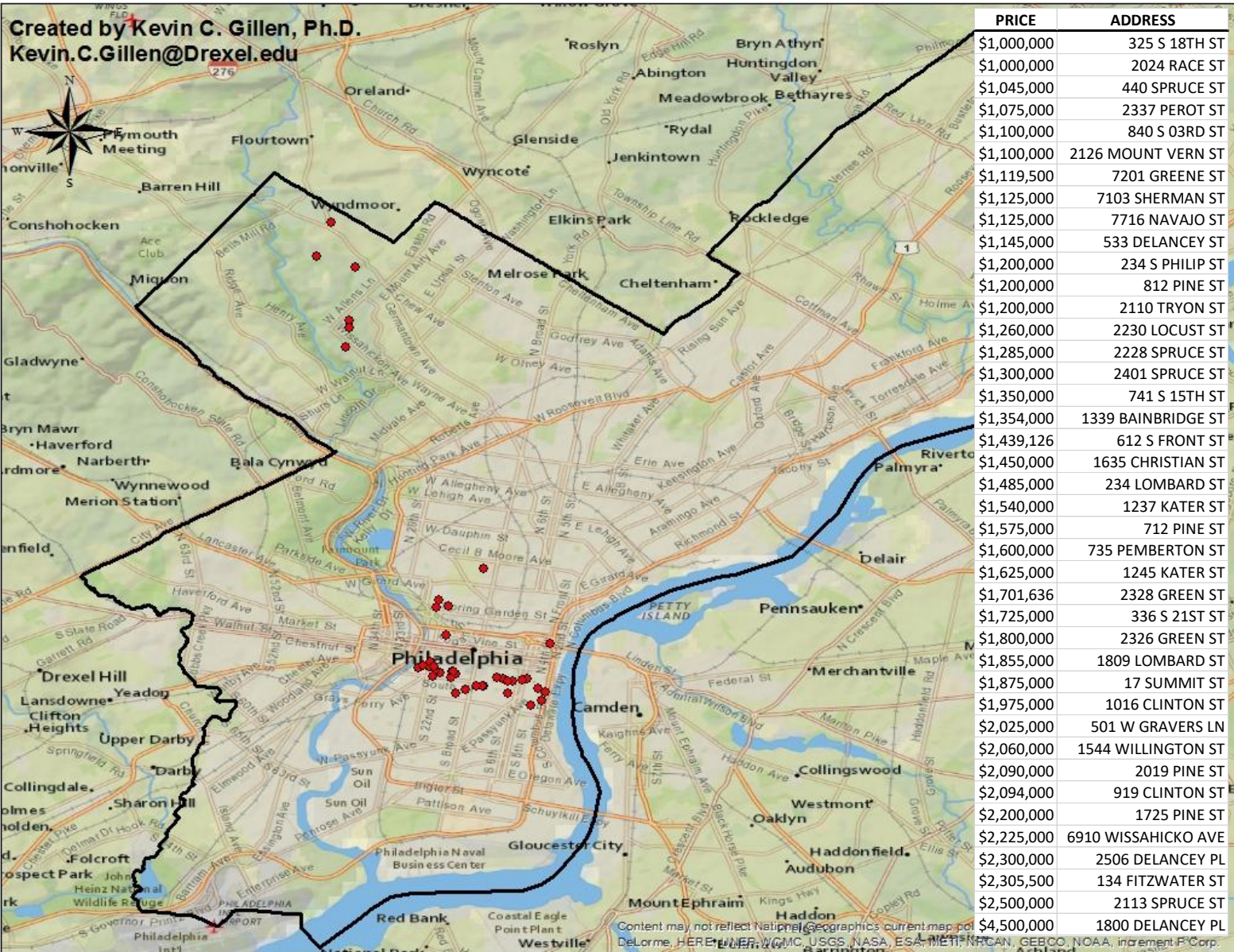


2017 Q2 House Price Rate of Change by Neighborhood



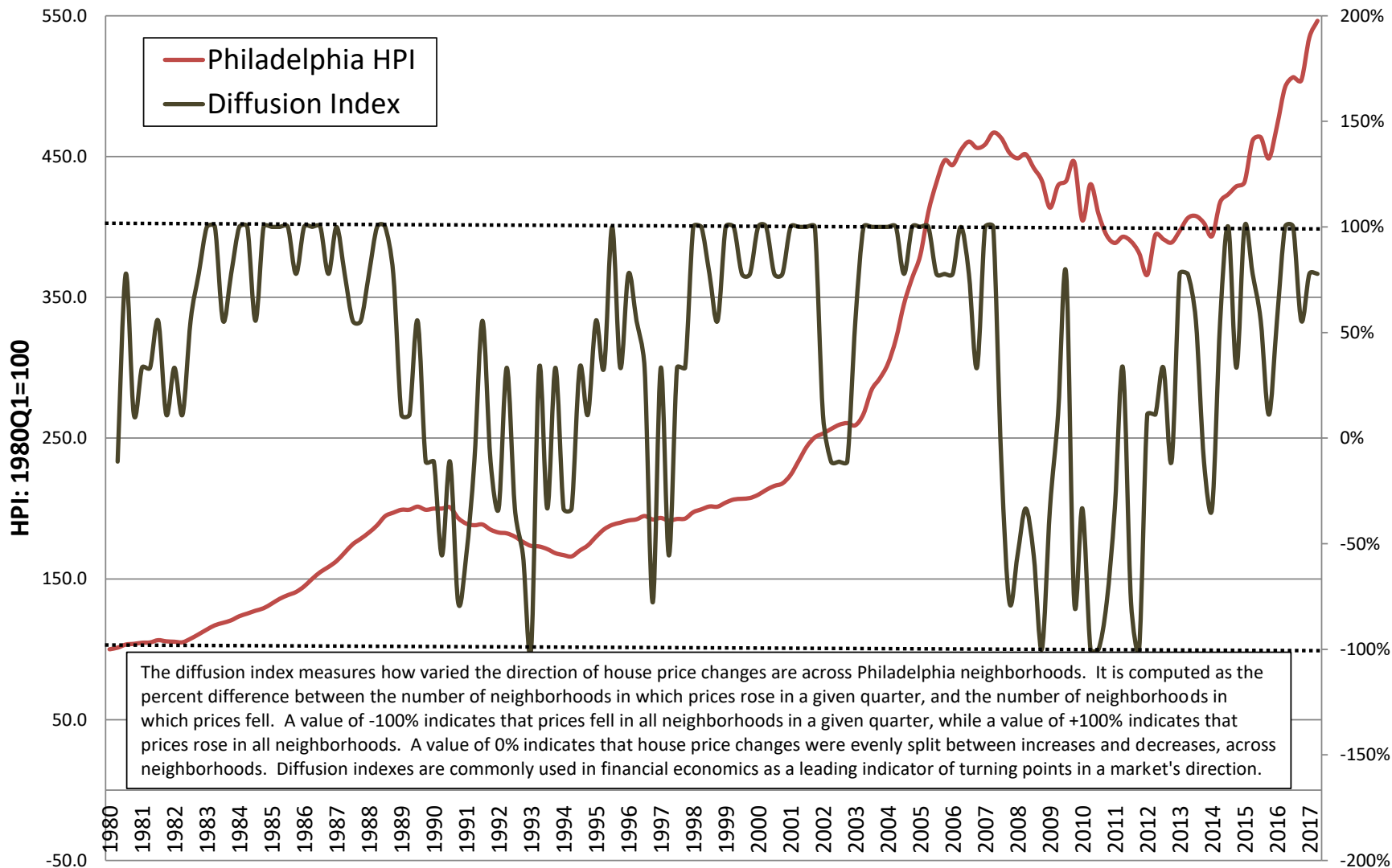
Note: Each neighborhood is extruded by its average change in house values during 2017 Q2 in order to reflect its growth (or depreciation) rate relative to other neighborhoods.

+ \$1 Million Dollar House Sales in 2017 Q2

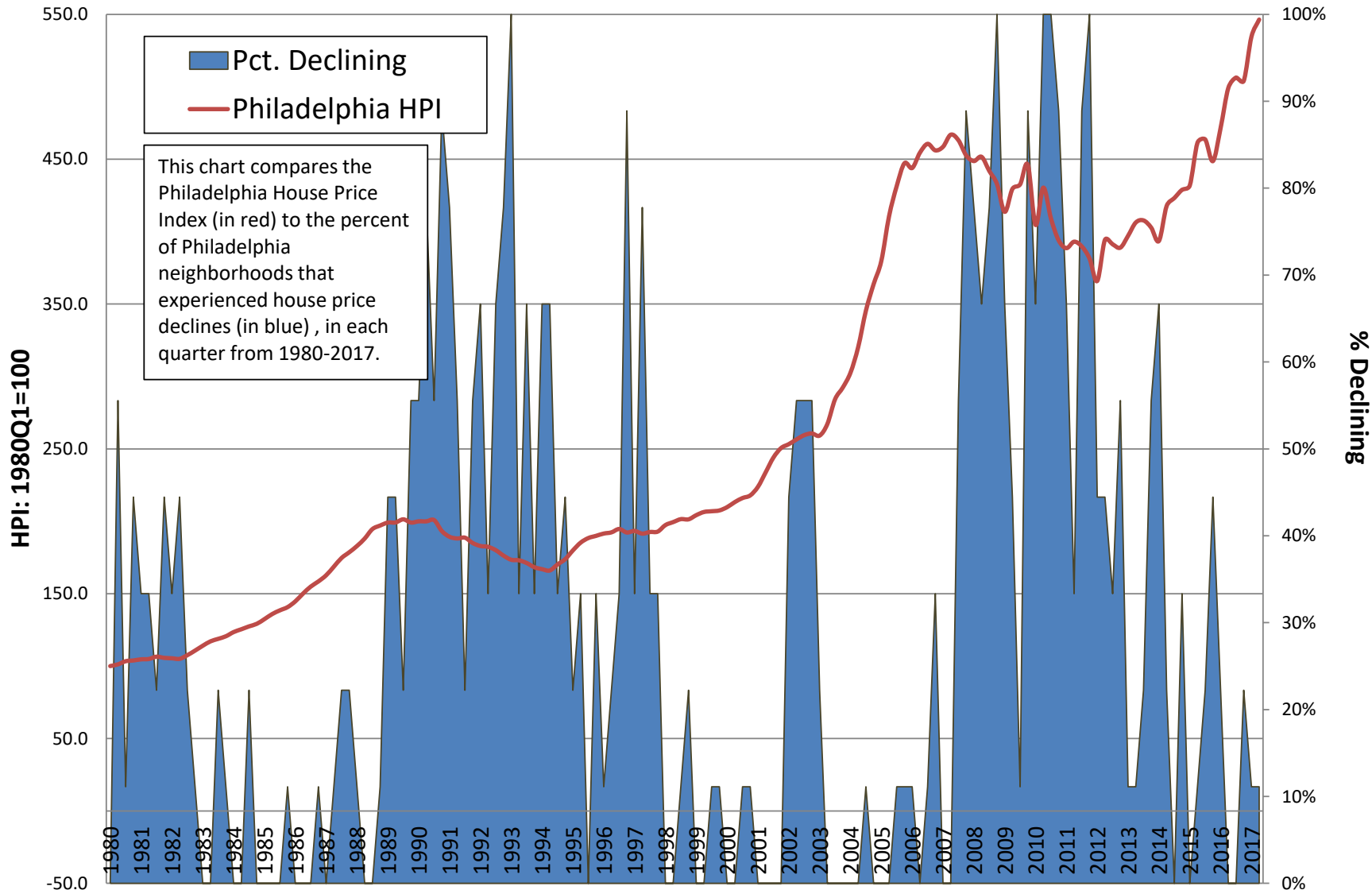


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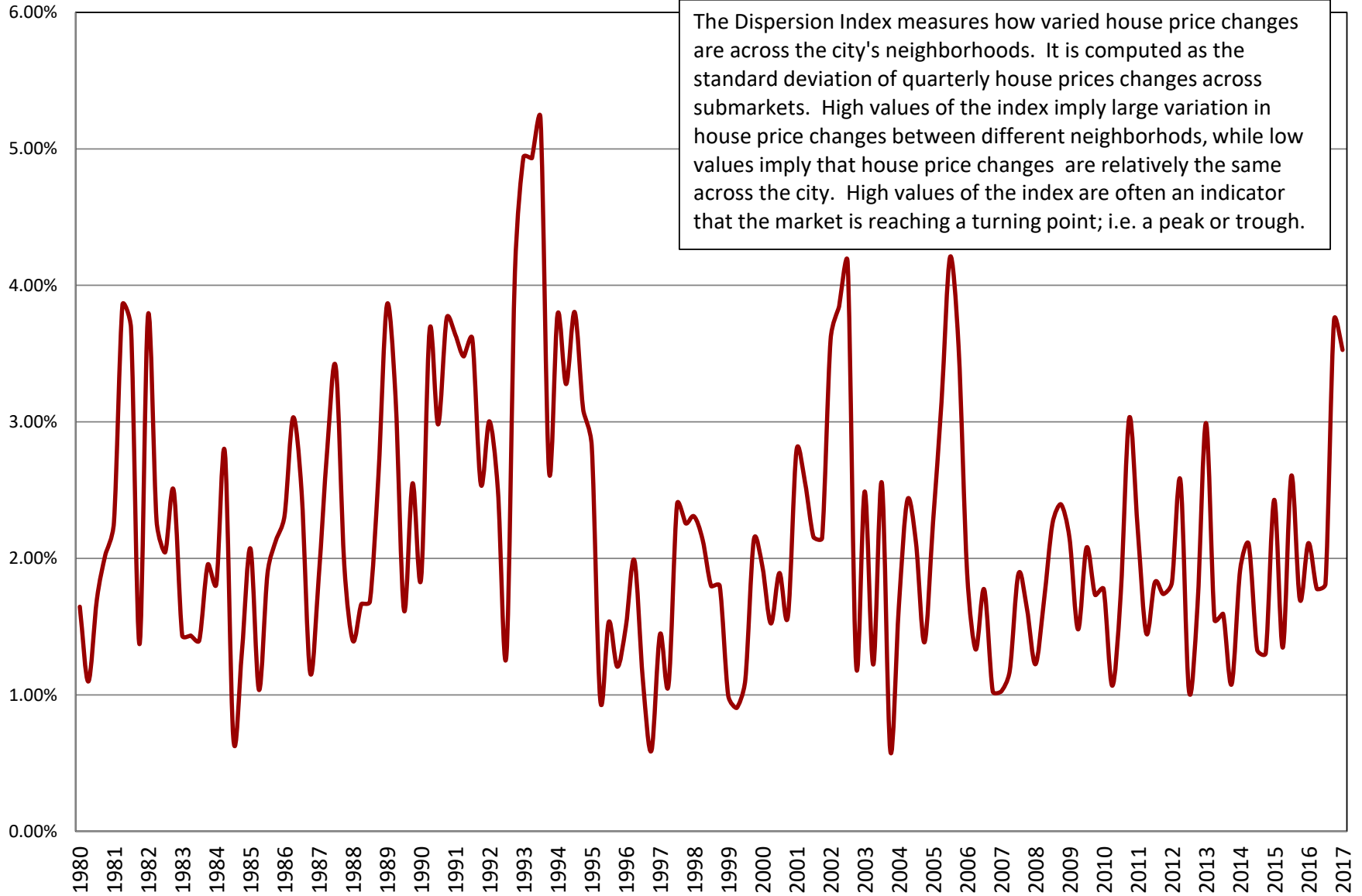
Philadelphia House Price Diffusion Index



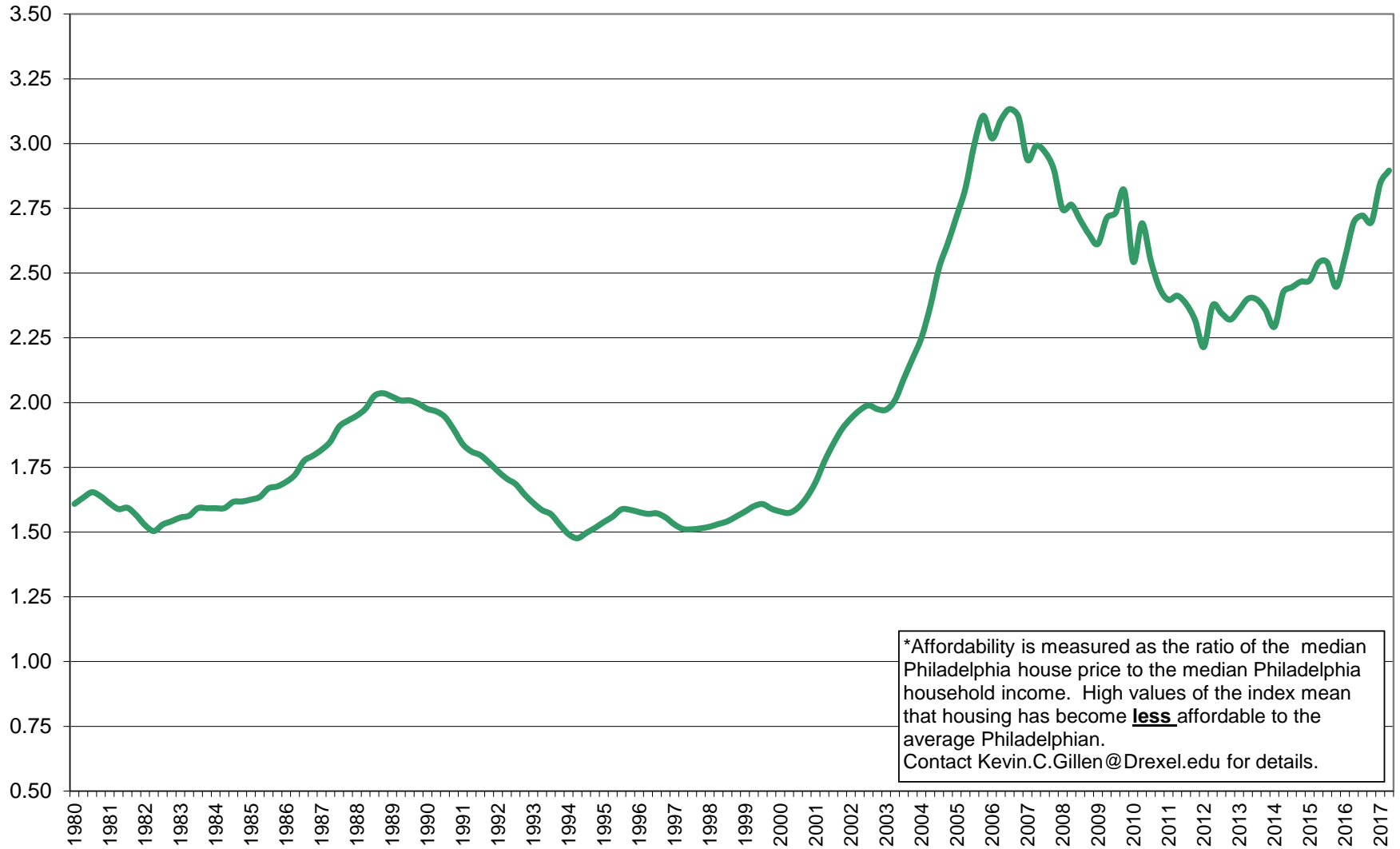
Philadelphia House Prices: Declines v. House Price Index



Dispersion Index of Philadelphia Housing

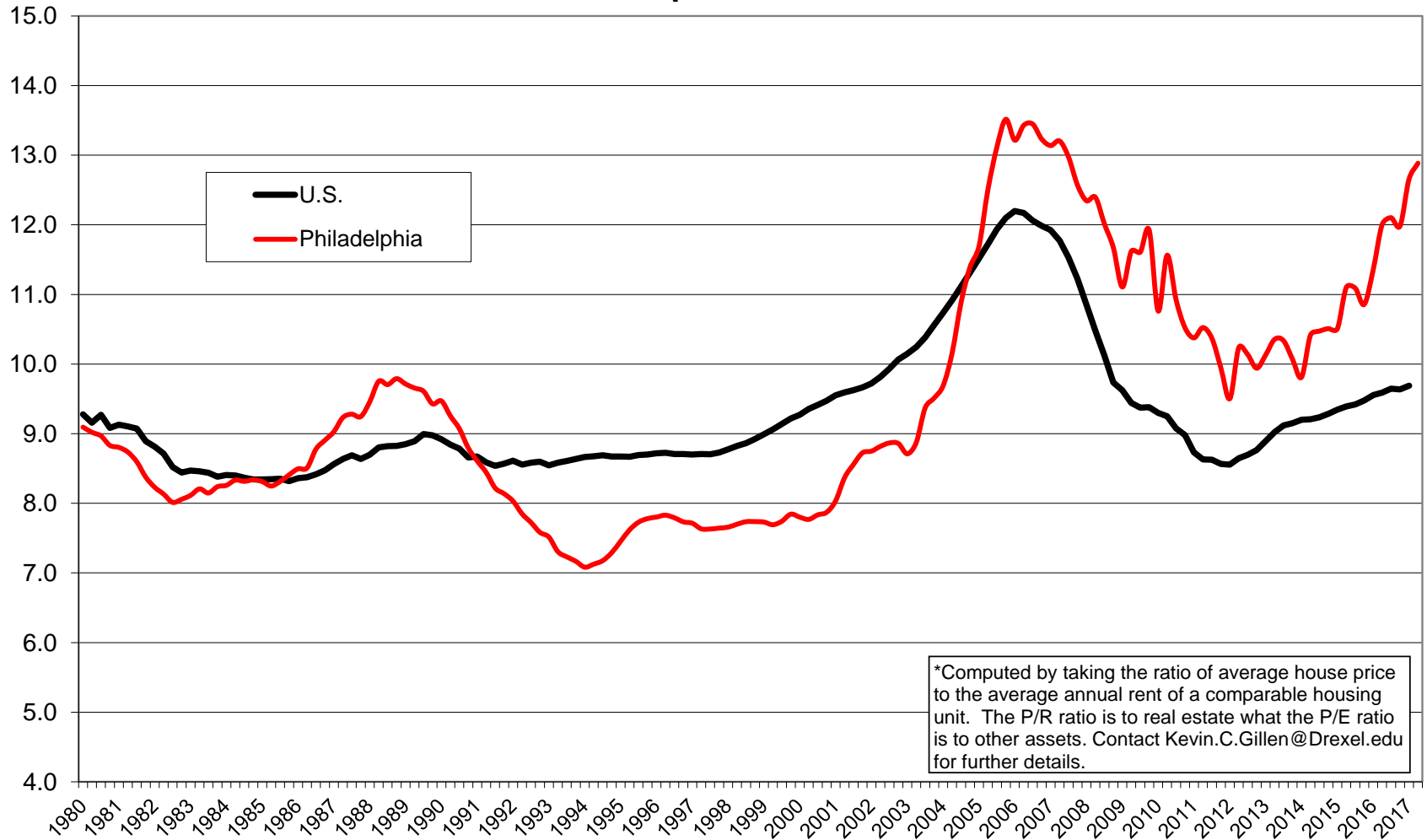


Philadelphia Housing Affordability* Index: 1980-2017



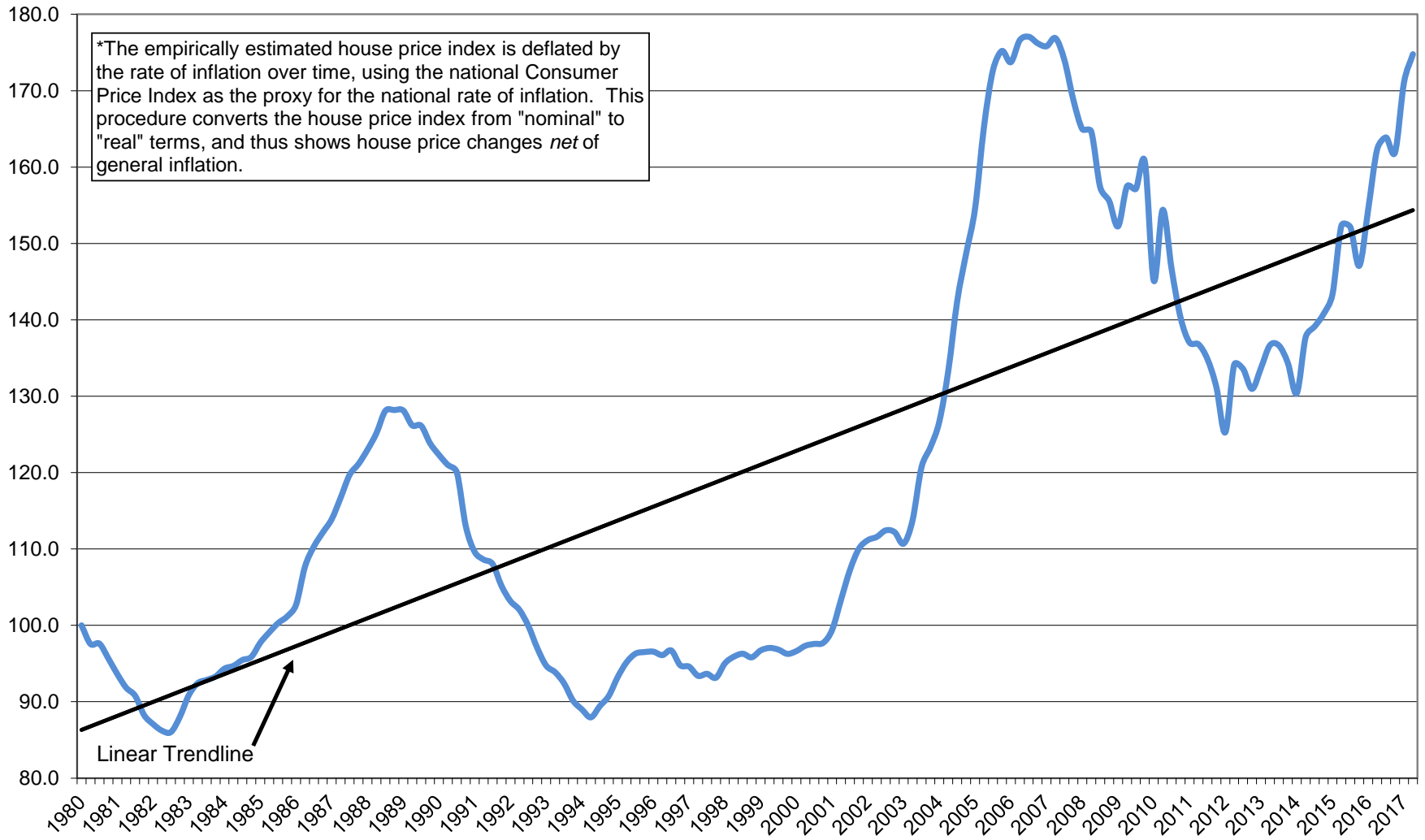
*Affordability is measured as the ratio of the median Philadelphia house price to the median Philadelphia household income. High values of the index mean that housing has become **less** affordable to the average Philadelphian. Contact Kevin.C.Gillen@Drexel.edu for details.

Average House Price-to-Rent Ratios*: 1980-2017 Philadelphia v. U.S.



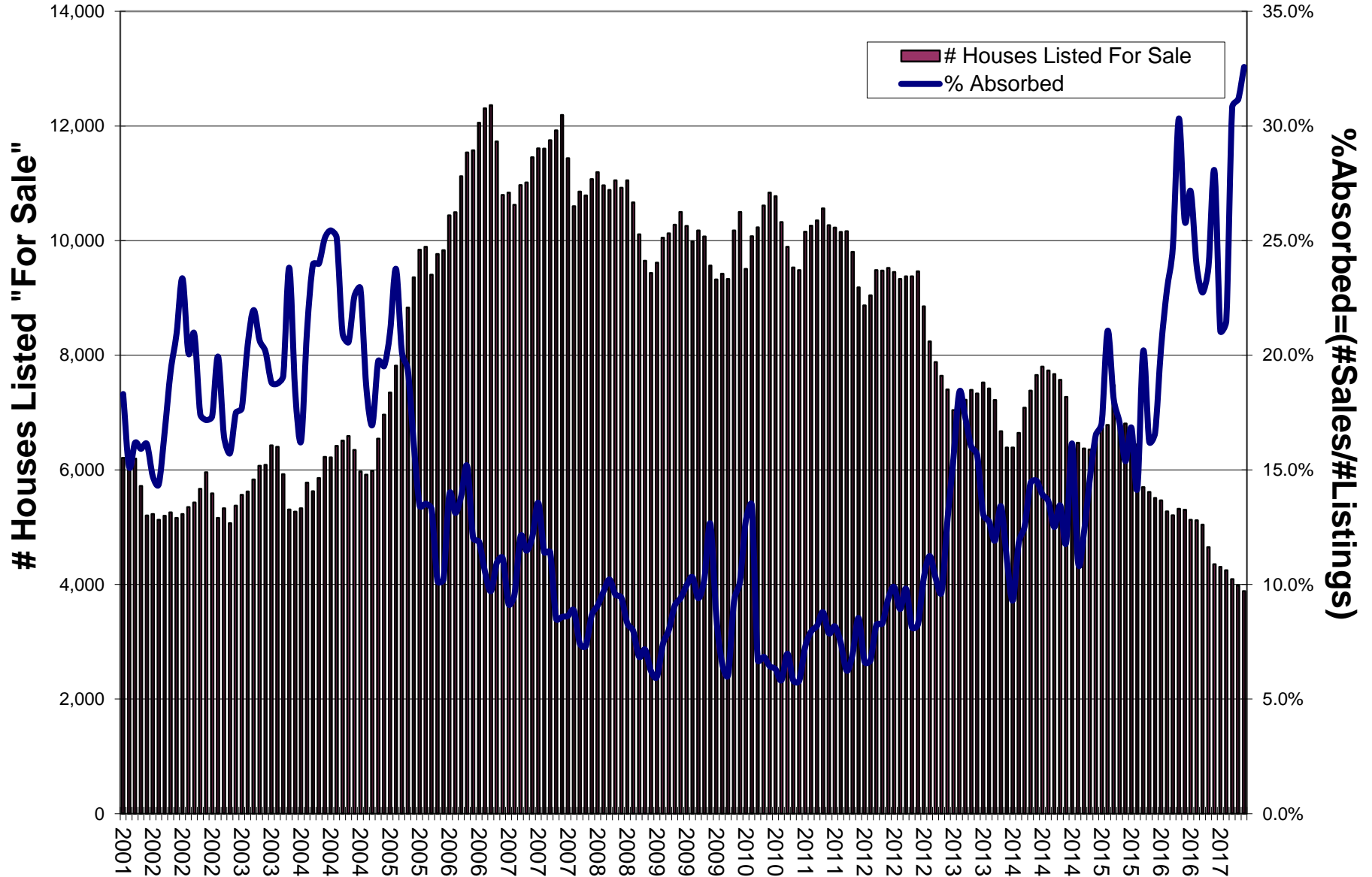
*Computed by taking the ratio of average house price to the average annual rent of a comparable housing unit. The P/R ratio is to real estate what the P/E ratio is to other assets. Contact Kevin.C.Gillen@Drexel.edu for further details.

Inflation-Adjusted* Philadelphia House Price Index 1980-2017 1980Q1=100



Source: US Bureau of Labor Statistics

Philadelphia Houses Listed For Sale: Inventory v. Sales Rate

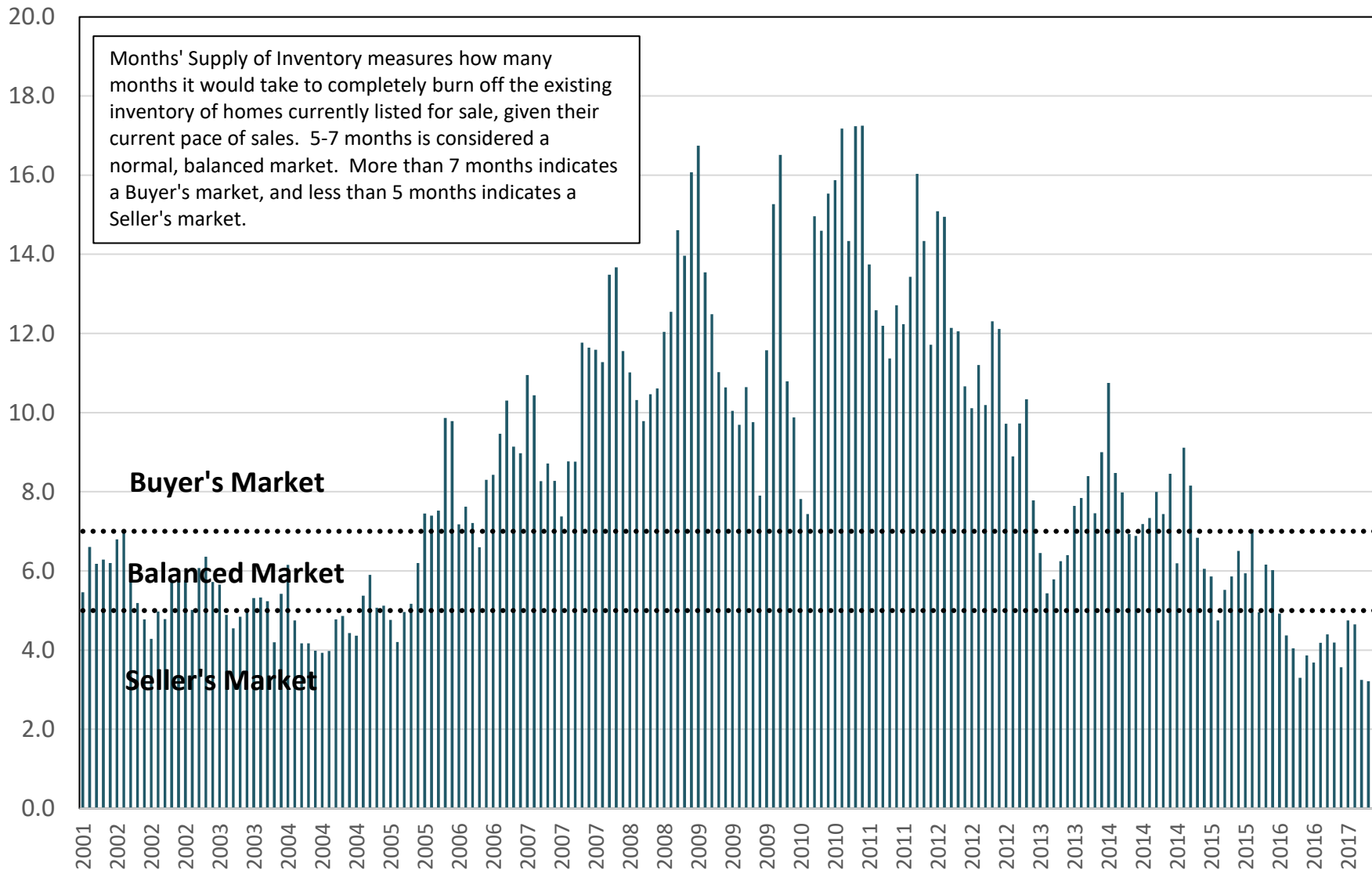


“%Absorbed” is defined as the percent of homes listed for sale in a given month that also sold in that same month.

Source: Trend MLS



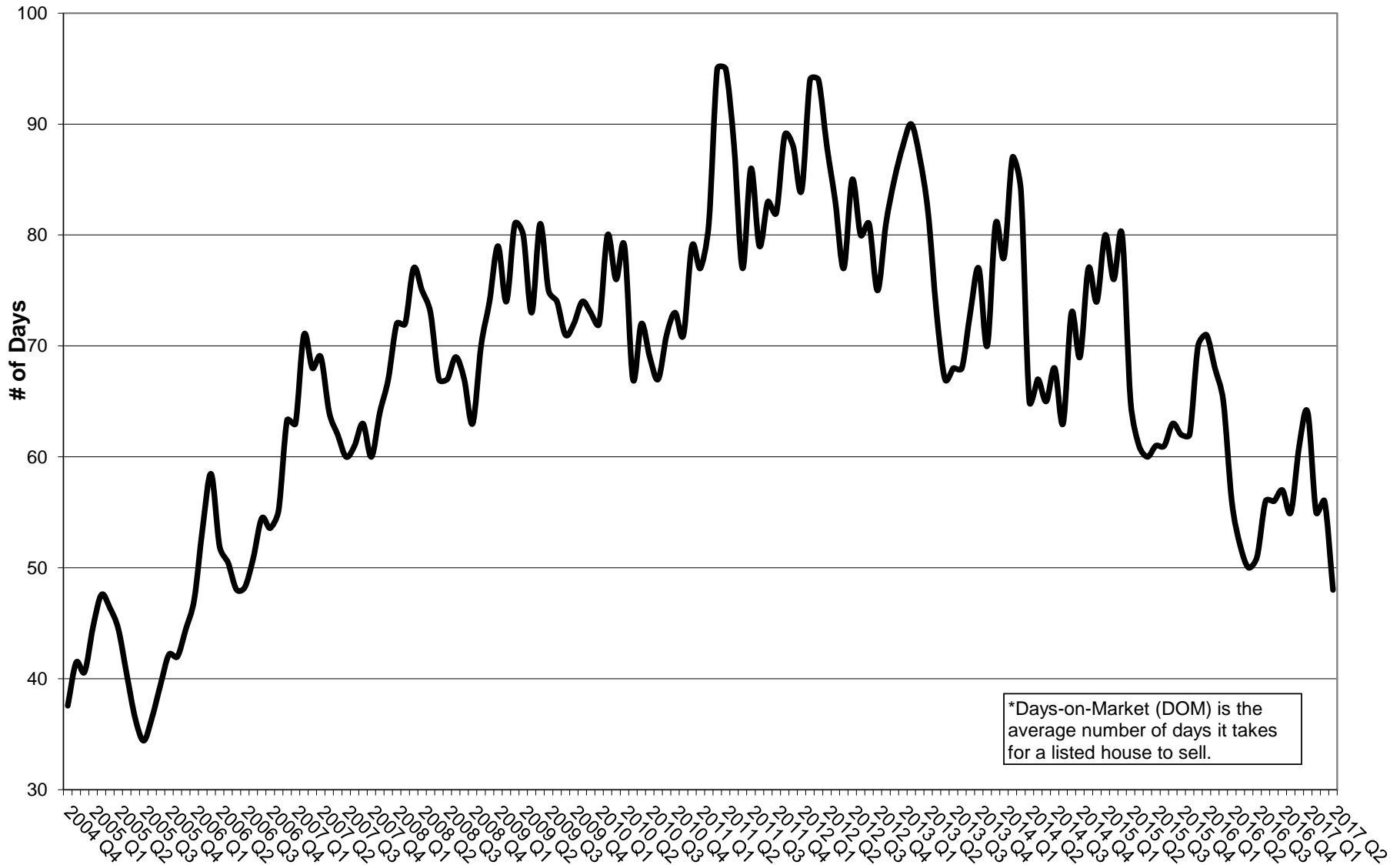
Months' Supply of Inventory in Philadelphia



Source: Trend MLS



Average Days-on-Market* for Philadelphia Homes

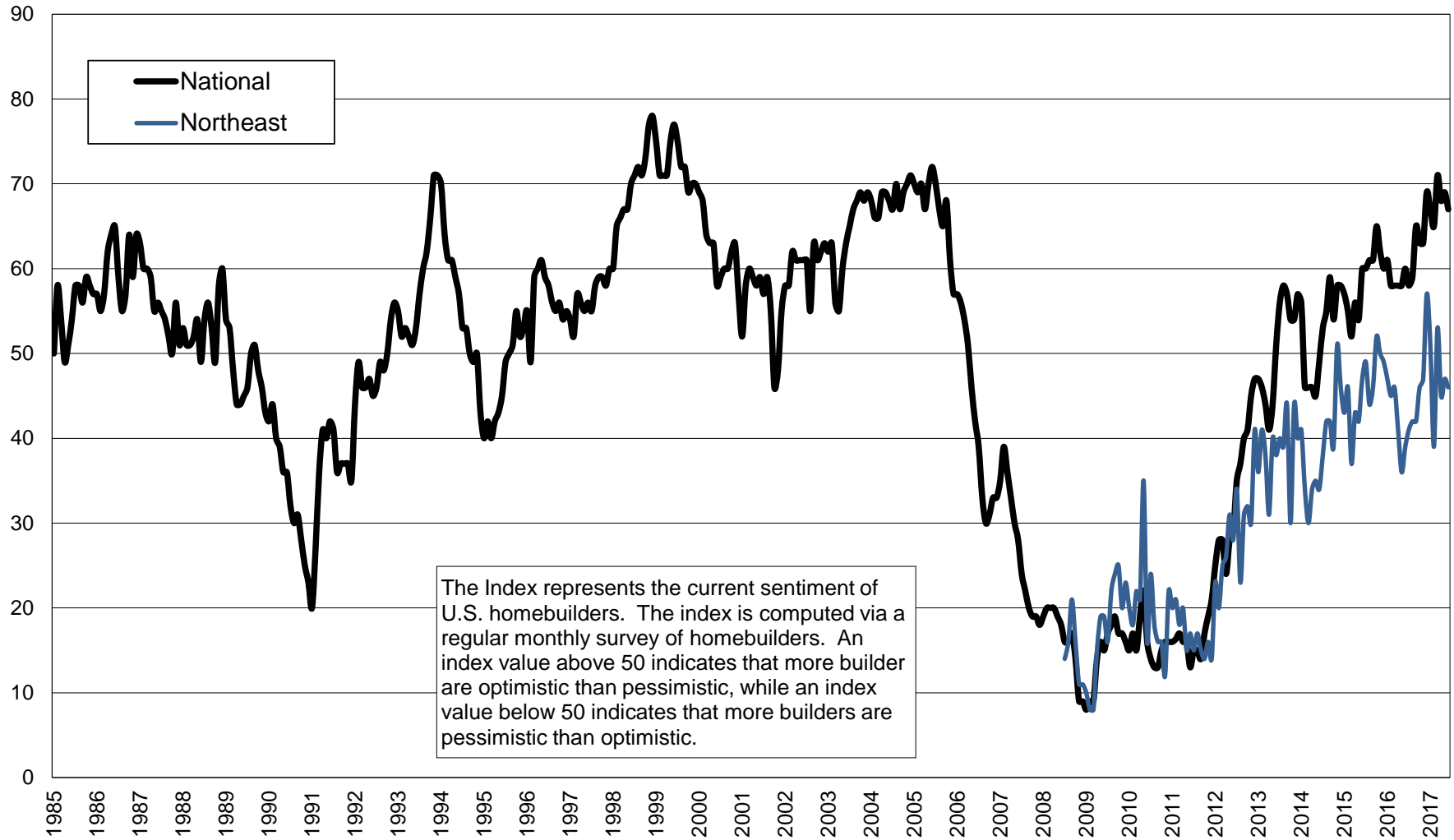


*Days-on-Market (DOM) is the average number of days it takes for a listed house to sell.

Source: Trend MLS

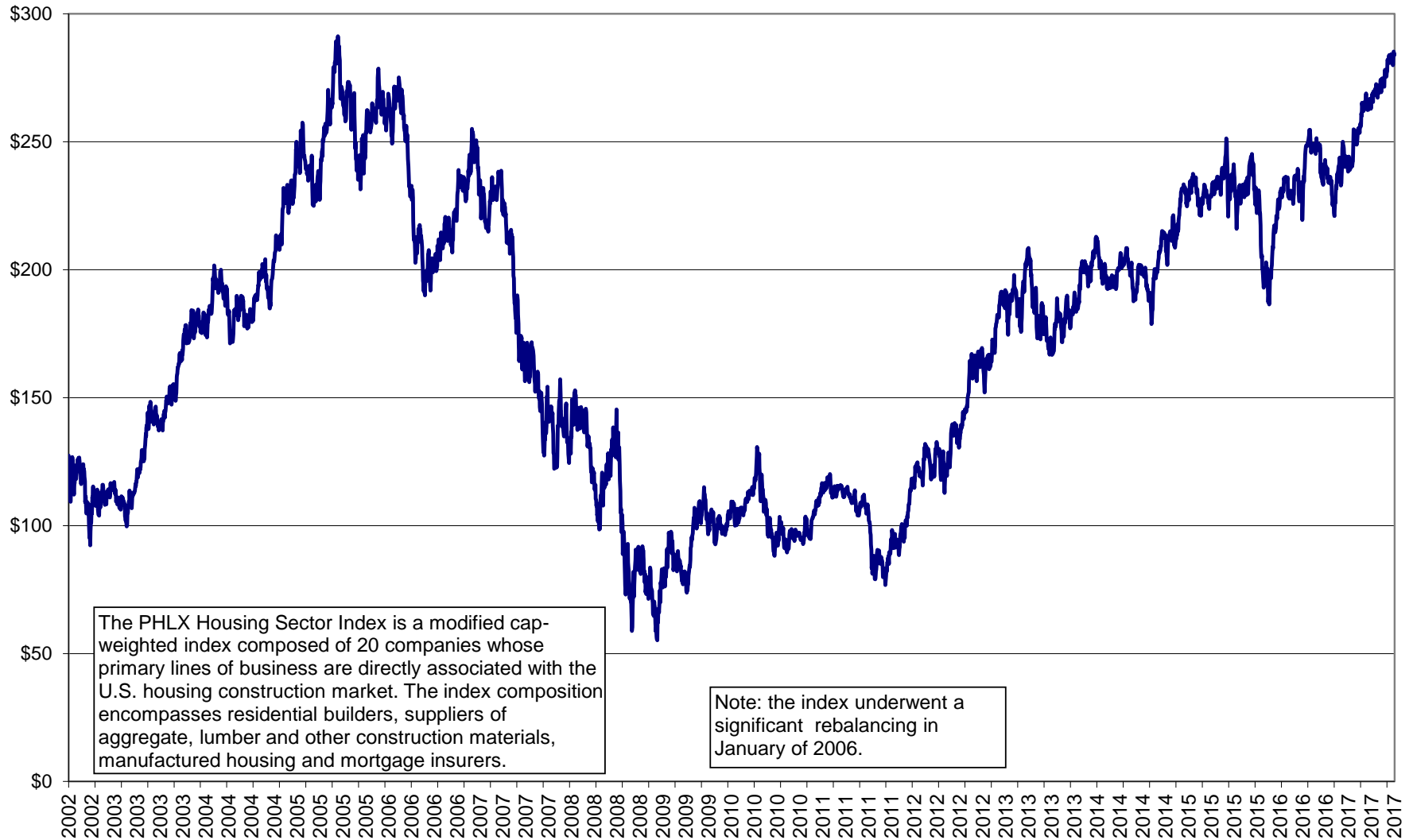


Index of Homebuilder Sentiment: 1985-2017 (Seasonally Adjusted)



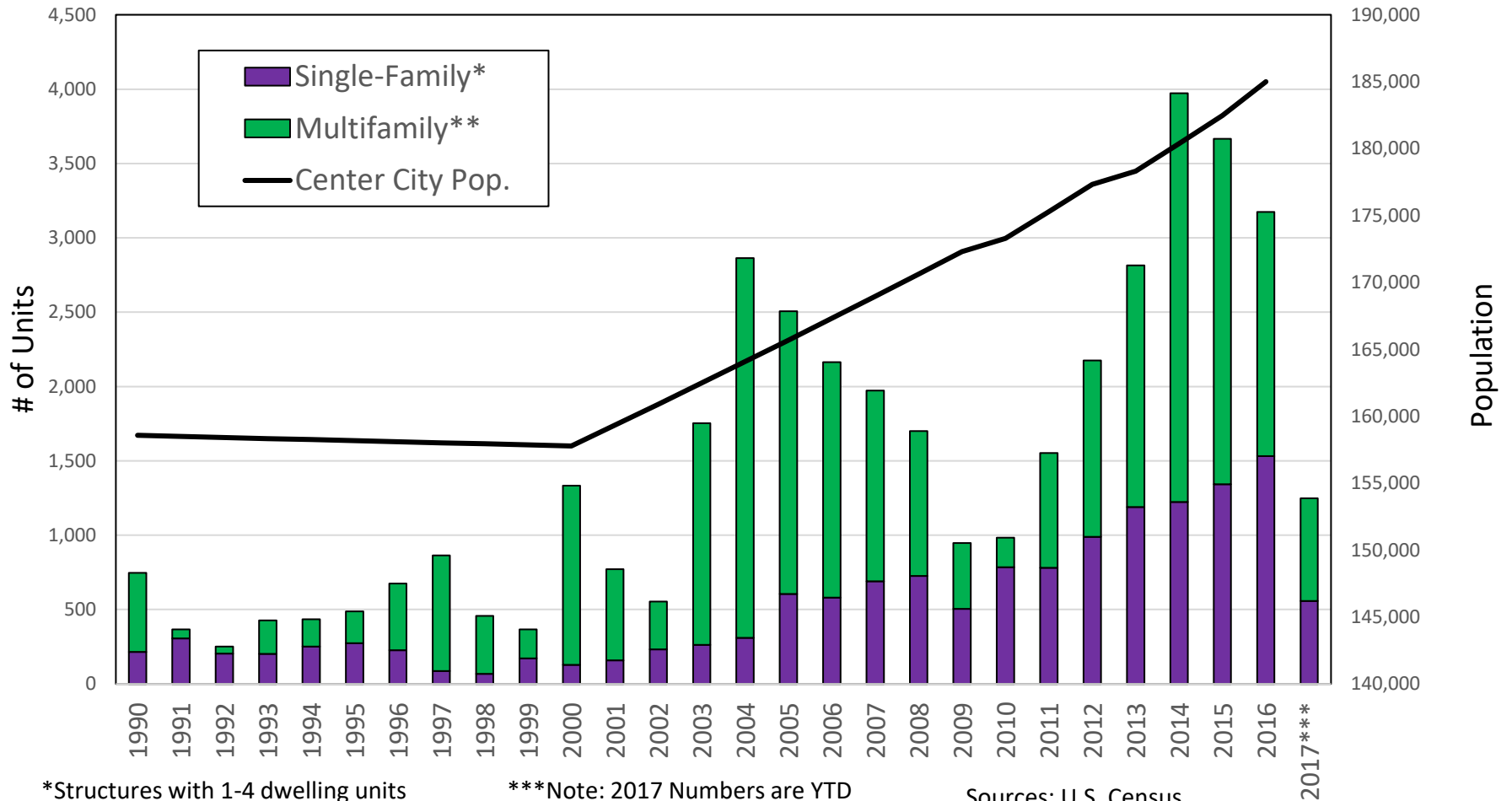
Source: National Assoc. of Homebuilders (NAHB)/Wells Fargo

Philadelphia Stock Exchange Housing Sector Index: 2002-2017



Source: finance.yahoo.com

Building Permits Issued for Construction of Residential Units in Philadelphia: Single-Family v. Multifamily



*Structures with 1-4 dwelling units

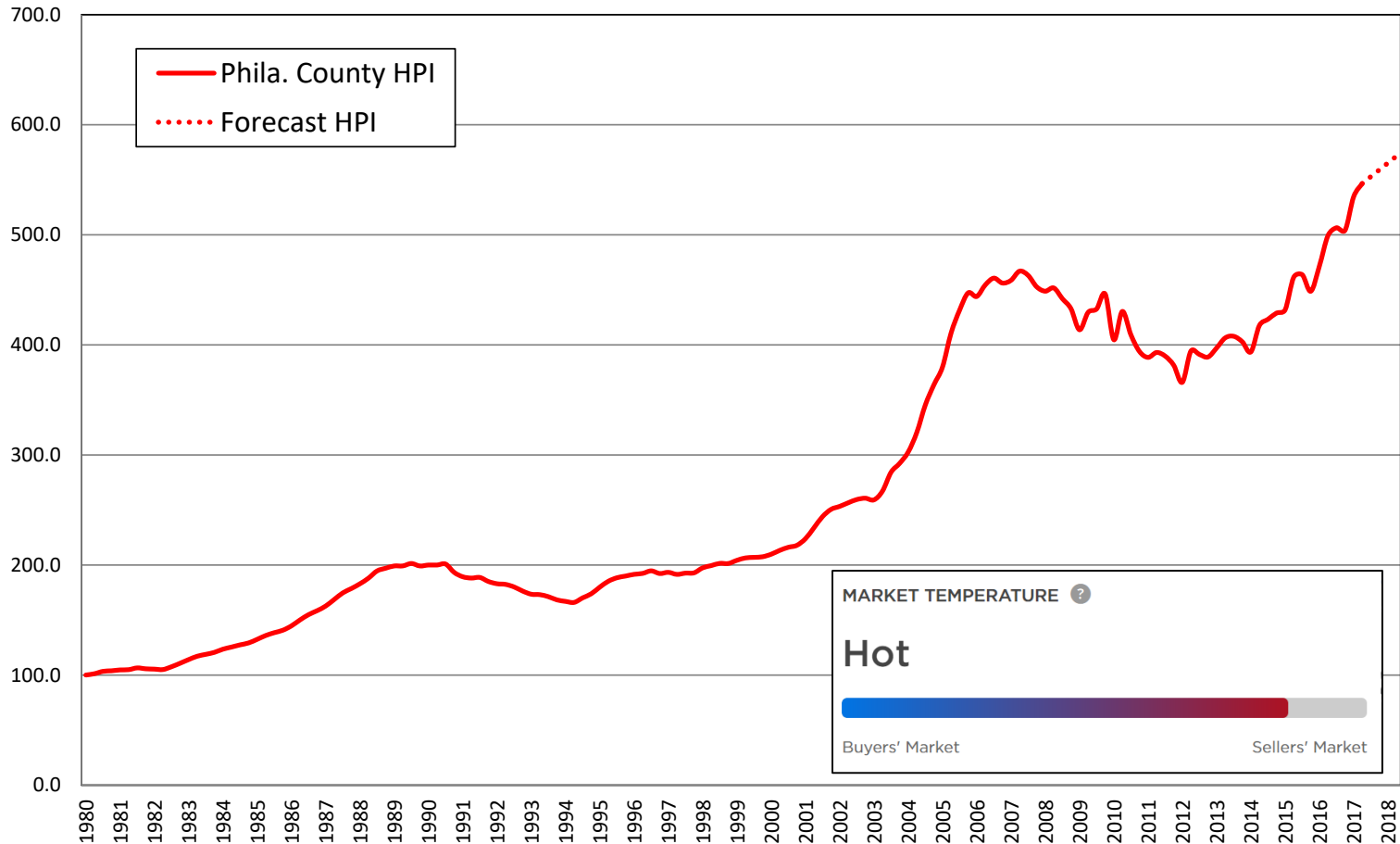
**Structures with >=5 dwelling units

***Note: 2017 Numbers are YTD numbers through May 2017.

Sources: U.S. Census
Center City District

Philadelphia House Price Index and 1-Year Forecast

Philadelphia House Price Index: Actual v. Forecast



Zillow.com is currently forecasting Philadelphia house prices to rise an average of 4.5% over the next year, which is an upgrade from its previous forecast of 3.5% made three months ago. Zillow also currently rates the temperature of Philadelphia's housing market as "Hot", which is unchanged from the previous rating three months ago.

Source: <http://www.zillow.com/philadelphia-pa/home-values/>

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