Preliminary Results on the Impact of the US-China Trade War on US House Prices

Griffin Hsu

Introduction

This paper examines the impact of the U.S.–China trade war (2017–2019) on U.S. housing prices. During this period, the U.S. imposed tariffs on over $360 billion worth of Chinese goods, while China retaliated with tariffs on $110 billion worth of U.S. exports. These trade disruptions affected various industries, employment levels, and local economic conditions, which in turn may have influenced housing markets. Housing prices, often used as indicators of economic well-being and quality of life, provide a valuable lens for assessing the broader effects of trade-induced economic shocks.

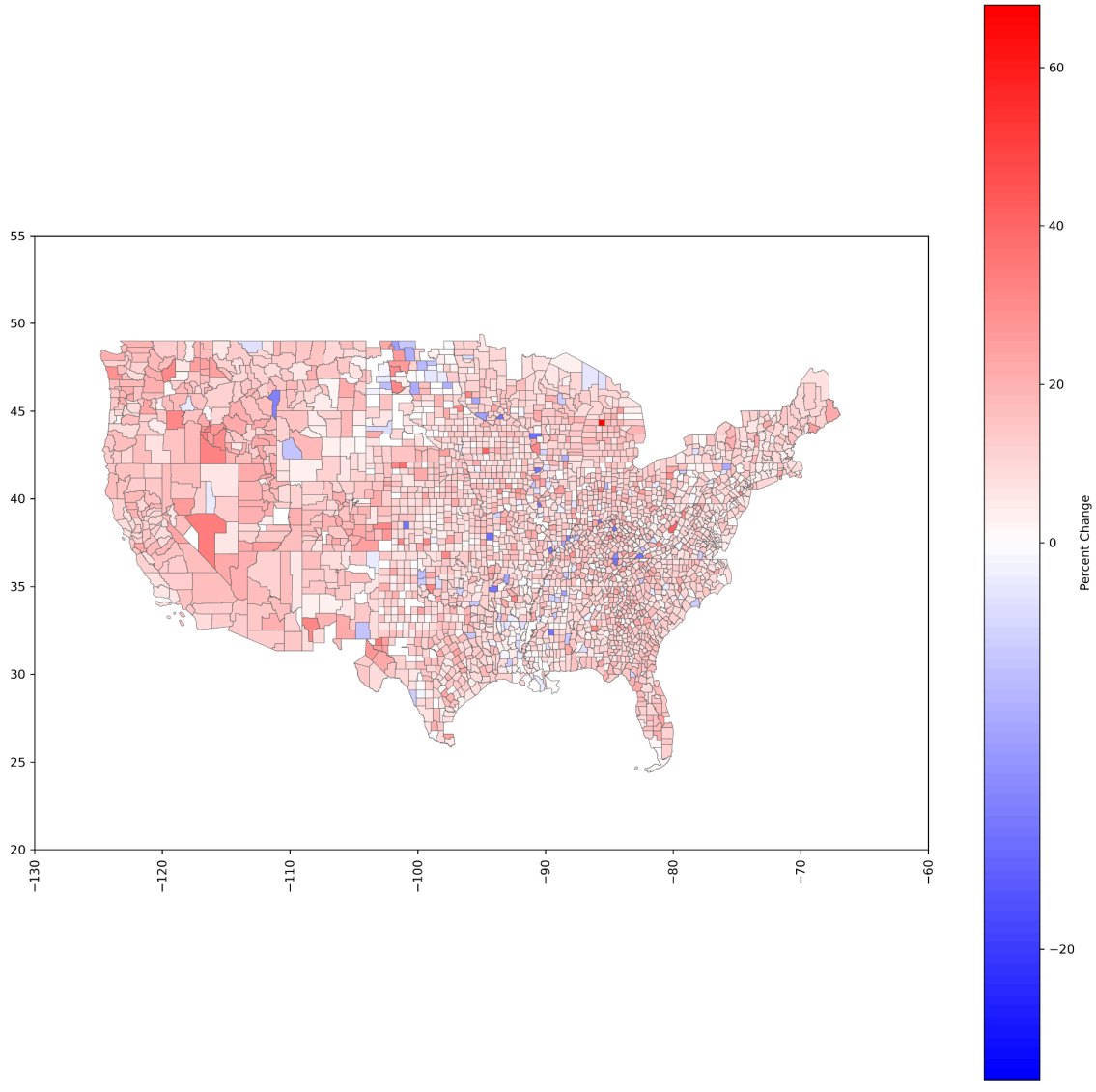
This study uses county-level housing price data from Zillow and employs a difference-in-differences approach to analyze how exposure to trade war-related economic shocks influenced local home values. Given the unprecedented scale of tariff increases during this period, understanding how such policy shifts impact regional economies is crucial.

This research builds on existing work that examines the economic consequences of the U.S.–China trade war. For instance, Waugh (2019) investigates the consumption response to trade shocks by analyzing automobile sales at the county level using a difference-in-differences framework. Similarly, Fajgelbaum et al. (2019) explore the short-run effects of the shift toward trade protectionism in their study *The Return to Protectionism*, highlighting how U.S. tariff policies disrupted supply chains and regional economies after decades of encouraging free trade. By focusing on housing prices, this paper contributes to the literature by examining a key economic indicator that reflects both household and investor sentiment in response to trade policy uncertainty.

Data

The data used in this study primarily consists of Zillow housing sale data from 2015 to 2020, combined with county-level tariff and population data from Michael Waugh's *Trade War Tracker*. Figures 1 and 2 present heat maps illustrating changes in housing prices and tariff levels from 2017 to 2019, respectively. As seen in Figure 1, The majority of the US experienced a medium level of housing price increase between the two years, with few states experiencing a drop in price. Unsurprisingly, there were no counties that experienced a drop in tariff levels, but many did not have high levels of tariff increases as seen in Figure 2.

Figure 1: Percentage Housing Price Change By County



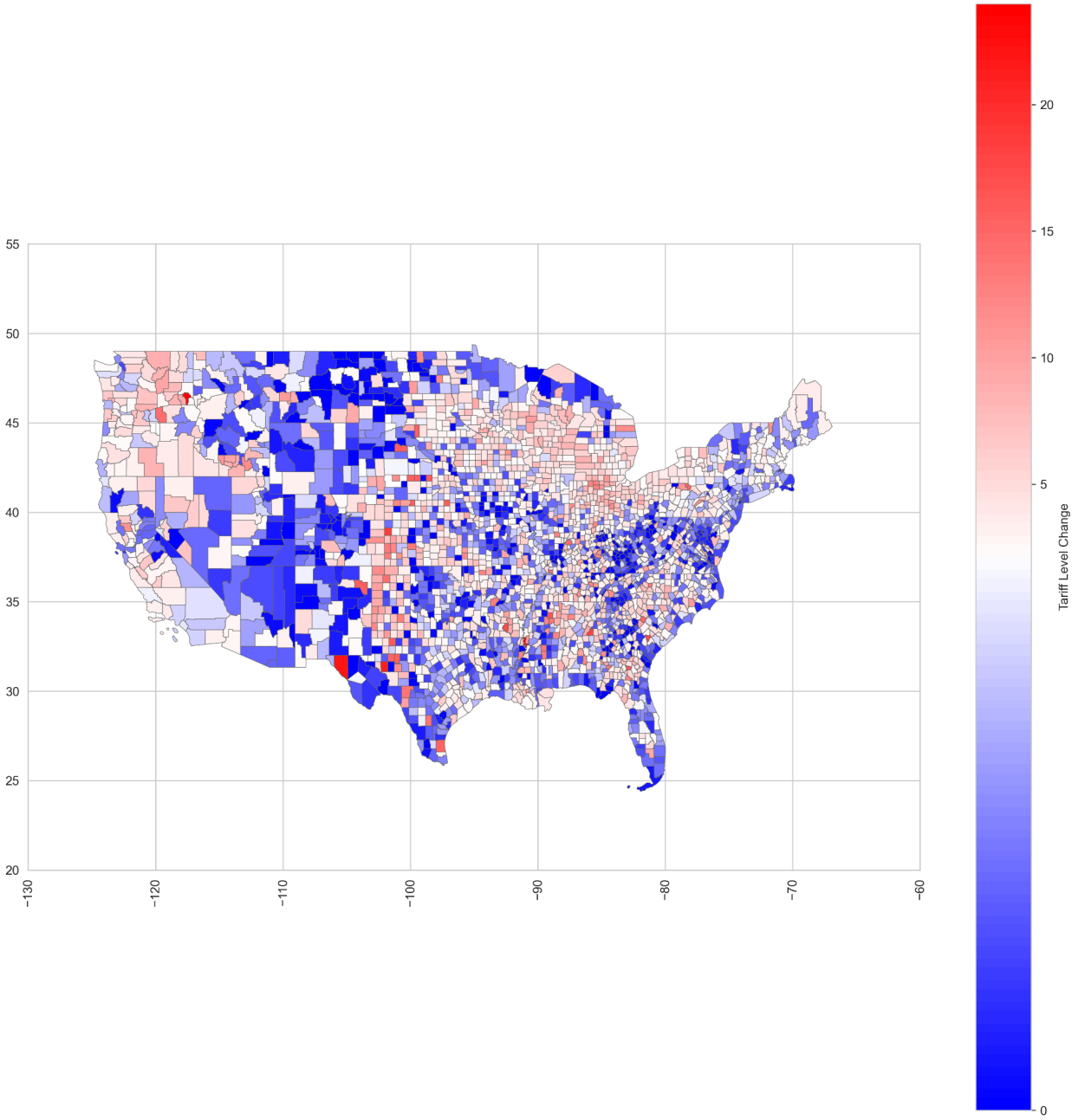


Figure 2: Tariff Level Changes By County

Note: Due to the fact that no counties experienced a drop in tariff levels, the heat map can be misleading as the minimum for the scale is 0 rather than a negative change

Figure 3 compares the differences in housing prices between counties in the top and bottom quartiles of tariff exposure. Notable events during the trade war are noted on the figure. The figure shows a notable increase in the mean (log) difference in housing prices between these quartiles following the initial tariff hike on steel and aluminum. Prior to the change, the difference between high and low tariff counties' housing prices was greater than after the tariffs. While the trend of the difference generally indicates an overall trend of a reduction in the gap between housing prices, there is a noticeable increase in the difference right after the US and China implement their respective 34 billion dollars worth of tariffs.

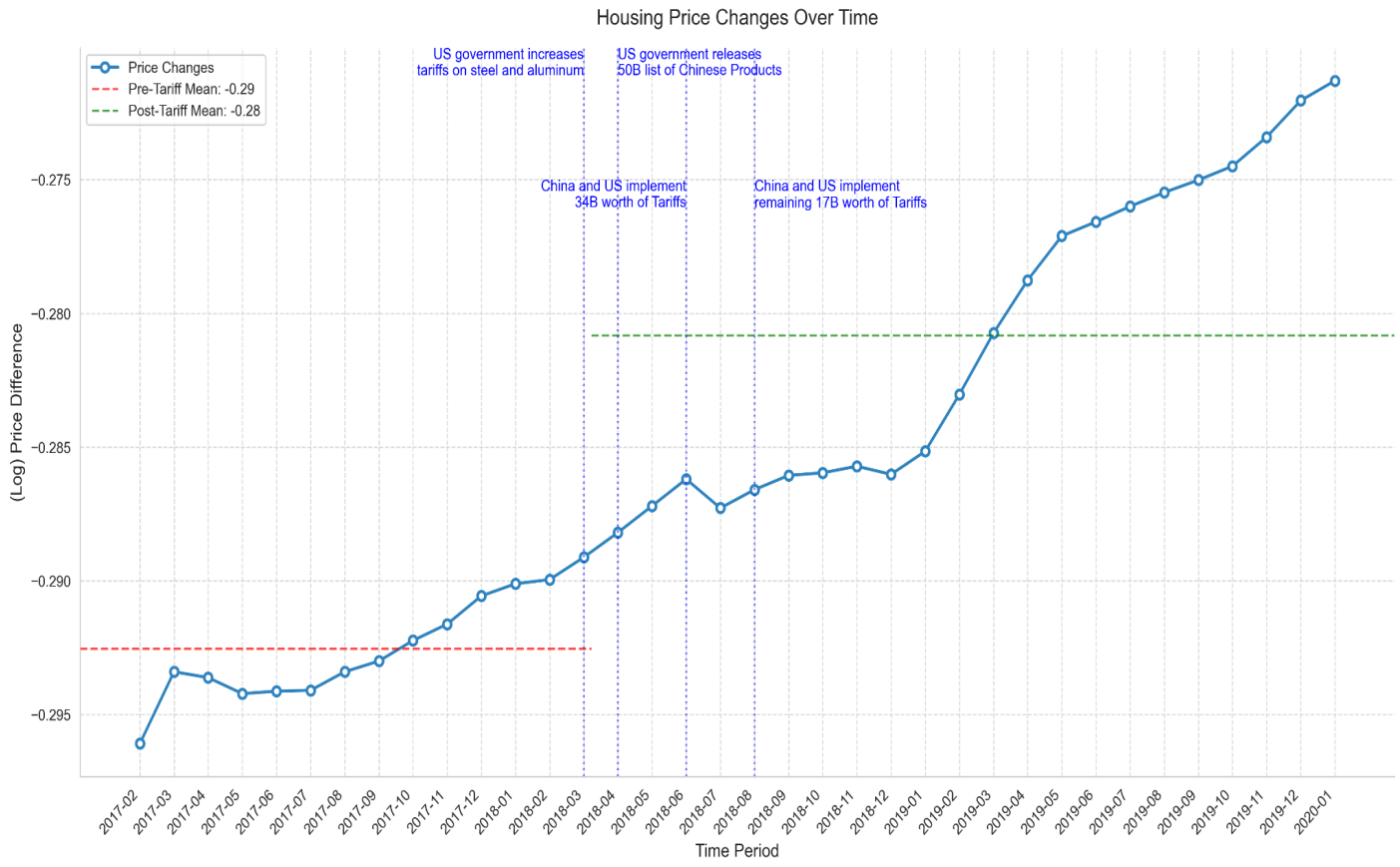


Figure 3: Housing Price Gaps Between US Counties Most and Least Affected by Protectionary Tariffs

Figure 4 visualizes the year-over-year log differences in housing prices relative to tariff levels. The size of each bubble represents the county's 2017 population. While there is significant variation in the distribution, the downward-sloping trend line suggests a negative relationship between tariff exposure and housing price growth.

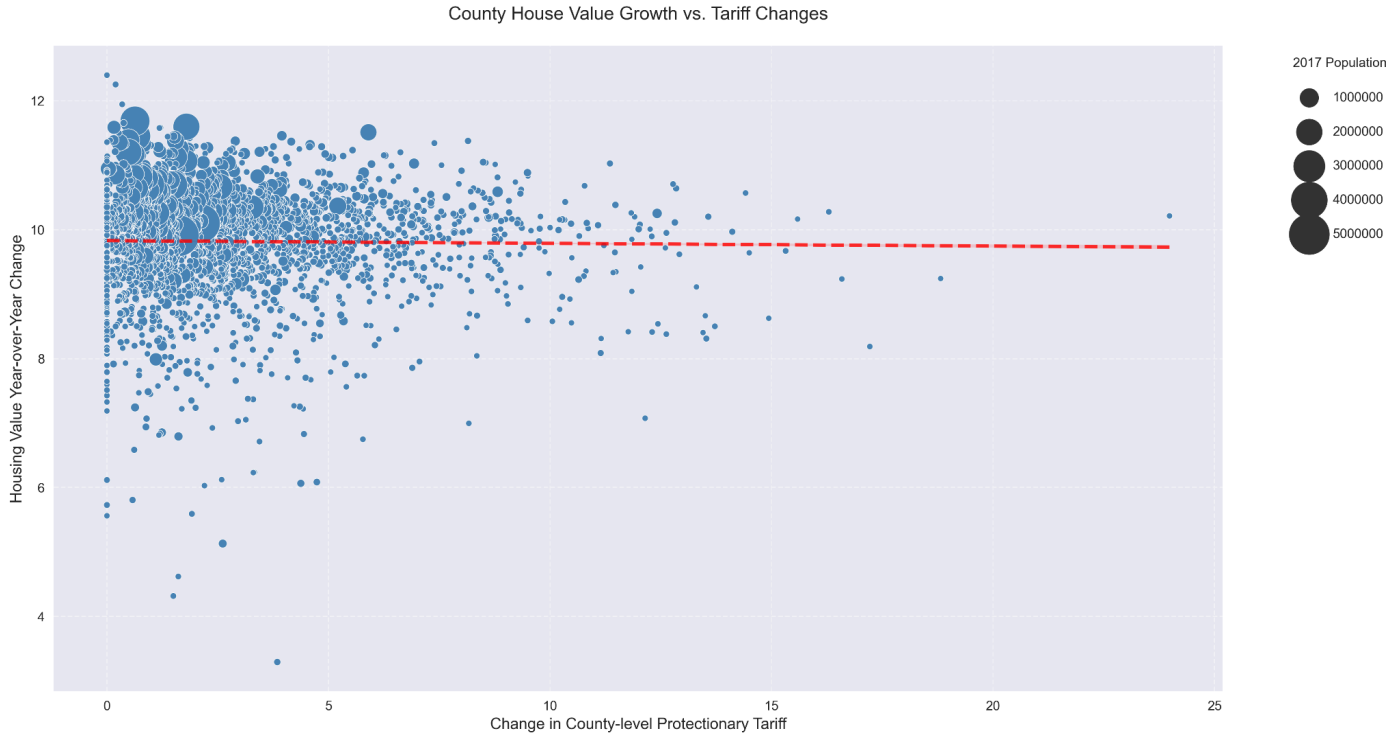


Figure 4: County House Value Growth vs. Tariff Changes

For this preliminary analysis, the empirical strategy involves regressing housing prices on tariffs using Zillow data. Multiple regression specifications were tested, varying fixed effects and control variables. Counties were weighted by their 2017 population, with county-level GDP included as a control variable.

Results

Table 1 presents the regression results. Column 1 reports a baseline regression of housing prices on tariffs without any controls or fixed effects. Column 2 introduces population-weighted estimates while still omitting controls. Columns 3 and 4 incorporate time fixed effects, with Column 4 additionally controlling for county-level GDP. Finally, Columns 5 and 6 extend the model by including county fixed effects while replicating the specifications in Columns 3 and 4.

The results indicate that, in the absence of controls, the estimated correlation between tariffs and housing prices is notably higher. However, once fixed effects and GDP controls are introduced, the magnitude of the relationship diminishes, suggesting that unobserved county-specific factors and other conditions play a significant role in explaining housing price fluctuations.

Appendix Table 1: Effect of Tariffs on Housing Prices

	(1)	(2)	(3)	(4)	(5)	(6)
	Baseline	Weighted	Time FE	Time FE	Both FE	Both FE
Tariff	0.011***	0.018***	0.002***	0.003***	0.004***	0.002***
	(0.000)	(0.001)	(0.000)	(0.000)	(0.001)	(0.001)
GDP				0.000***		-0.003***
				(0.000)		(0.001)
Fixed Effects:						
County	N	N	N	N	Y	Y
Time	N	N	Y	Y	Y	Y
Observations	65,895	65,895	65,895	65,895	65,895	65,895
R-squared	0.246	0.306	0.008	0.023	0.010	0.134

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered at the county level shown in parentheses. Columns (2)–(6) weight observations by county 2017 population. The dependent variable is 12-month log difference in county-level housing prices. GDP is measured in millions of dollars.

Table 1: Housing Price Growth and Tariff Exposure

Figure 5 presents the estimated effects of tariffs on housing prices at a monthly frequency, with 90–10 confidence intervals. The coefficients from the initial months suggest a stronger impact of tariffs on housing prices, with a particularly notable drop around July 2017. This sharp negative spike indicates that, contrary to expectations, tariffs may have led to a decline in housing prices rather than an increase.

Overall, while the relationship between tariffs and housing prices appears to be generally weak or slightly positive, there are periods where the correlation turns negative. These fluctuations suggest that tariff effects on housing markets may be nonlinear or influenced by additional factors over time.

Figure 5: Housing Prices and Chinese Tariffs