

A Historical Housing Price Index from South China: 1570–1949

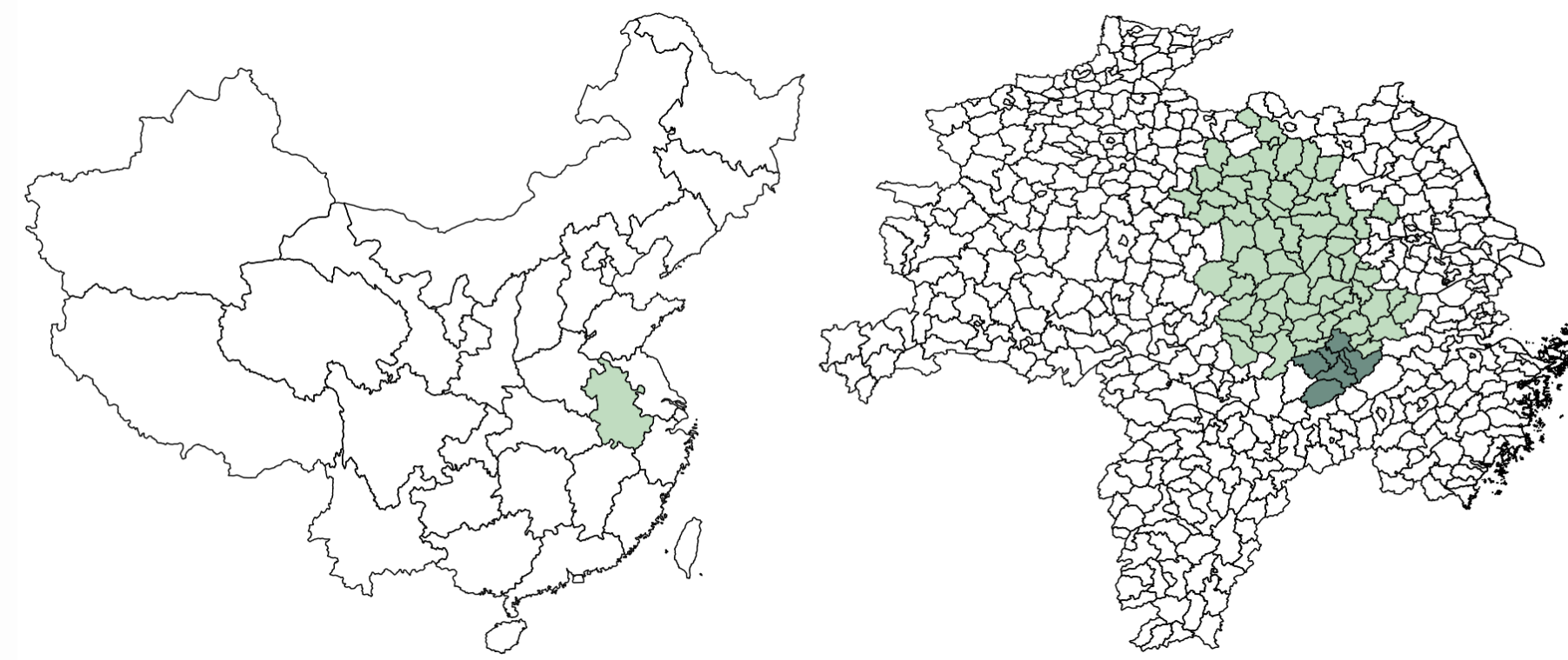
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Introduction

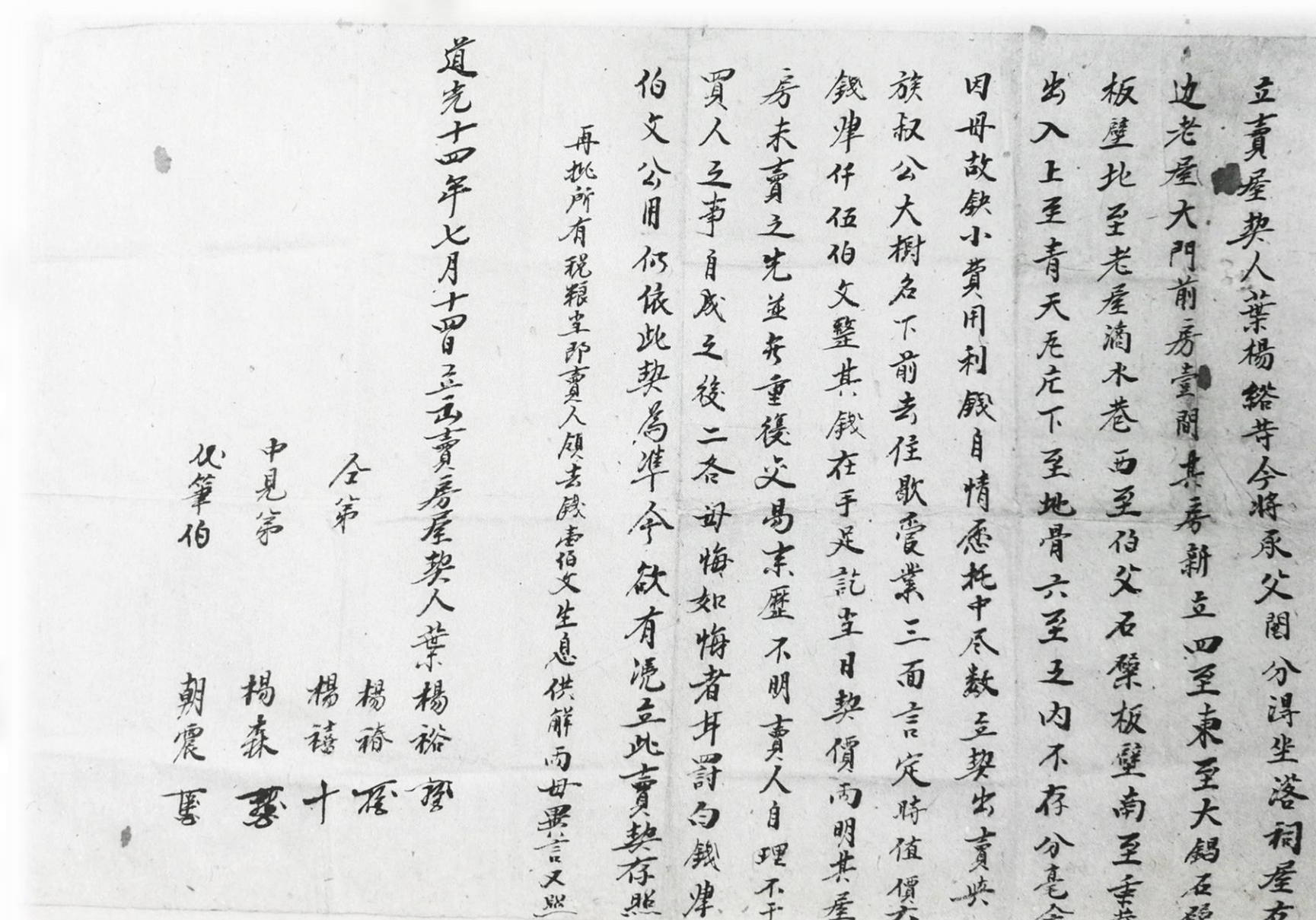
- Economic studies on premodern housing markets are still limited by the scarcity of data and the scope of which is limited to a few urban areas scattered across the globe.
- In this paper, I collect a unique housing transaction dataset with over 1000 observations from the historic Huizhou prefecture, a relatively rural area in south China that had strong economic influence in late imperial China.
- This study develops a housing price index that covers the late Ming Dynasty, the Qing Dynasty, and the Republic of China era (1570–1949).
- My results reveal price determinants that are unique to the historical and cultural background of the Huizhou housing market.

Data

- The property transaction records were collected in southern Anhui province (the historic Huizhou prefecture):



- These transaction records look like:



- These houses look like:



- I obtain the following variables from these documents:

Variable	Mean	Std.Dev.	Min	Max
Sample: All Transactions; N=1031				
log(Price)	4.228	3.176	-1.347	16.81
Silver	0.351	0.478	0	1
Female Seller	0.113	0.317	0	1
Same Lineage	0.438	0.496	0	1
Same Family	0.067	0.250	0	1
Seller in Urgent Situation	0.029	0.168	0	1
Next to Ancestral Halls	0.045	0.207	0	1
Subsample: Residential and Commercial Houses; N=679				
log(Price)	4.650	3.191	-1.204	16.81
Silver	0.333	0.472	0	1
Number of Rooms	3.362	4.778	0	72
Female Seller	0.113	0.317	0	1
Same Lineage	0.436	0.496	0	1
Same Family	0.077	0.266	0	1
Seller in Urgent Situation	0.034	0.181	0	1
Next to Ancestral Halls	0.056	0.230	0	1
Abandoned	0.021	0.142	0	1
New	0.038	0.192	0	1

Method

- For price indices:

$$\ln(\text{Price}_{it}) = \beta X_{it} + \gamma_1 T_i + \gamma_2 \text{county}_i + \epsilon_{it}$$
 - T_i is a vector of time dummy variables; γ_1 are the base values of price indices.
- For housing price determinants:

$$\ln(\text{Price}_{it}) = \beta X_{it} + \gamma_1 T_i + \gamma_2 \text{county}_i + \gamma_3 T_i * \text{county}_i + \epsilon_{it}$$
 - X_{it} is a vector of housing characteristics, such as the number of rooms, location, etc., β reflects the impact of each characteristic on the housing price.

Price Determinants

- Conventional determinants such as the size and layout of the property played a role in Huizhou:

	(1) log(House Price)	(2) log(Land Price)
House Size & Style		
3 Room Style	0.960 (1.45)	0.115 (1.17)
3Room × Rooms	0.054* (2.06)	0.071* (2.19)
4 Room Style	0.951 (1.43)	-0.005 (-0.01)
4Room × Rooms	0.081*** (5.41)	0.116* (2.36)
Other × Rooms	0.323 (1.39)	0.073 (0.23)

- Several price determinants are unique to the historical and cultural context:

Seller/Buyer Characteristics				
Female Seller	-0.185 (-0.92)	-0.097 (-0.34)	-0.563 (-0.92)	0.033 (0.04)
Same Lineage	0.045 (0.34)	-0.135 (-0.79)	0.355 (1.05)	-0.169 (-0.29)
Same Family	0.056 (0.24)	0.431 (1.18)	0.431 (0.49)	-2.370 (-1.15)
Seller in Urgent Situation	1.327*** (4.08)	0.451*** (3.80)	0.270 (0.20)	3.113 (1.32)
Transaction Characteristics				
Next to Ancestral Hall	0.732** (2.86)	0.682* (1.80)	0.570 (0.55)	0.862 (0.61)
Next to Temple	-0.658 (-1.32)	-1.342* (-1.88)		
Old	0.290 (0.74)	0.141 (0.25)		
New	0.248 (0.83)	0.037 (0.09)		
Decade or Year FE				
	Decade	Year	Decade	Year

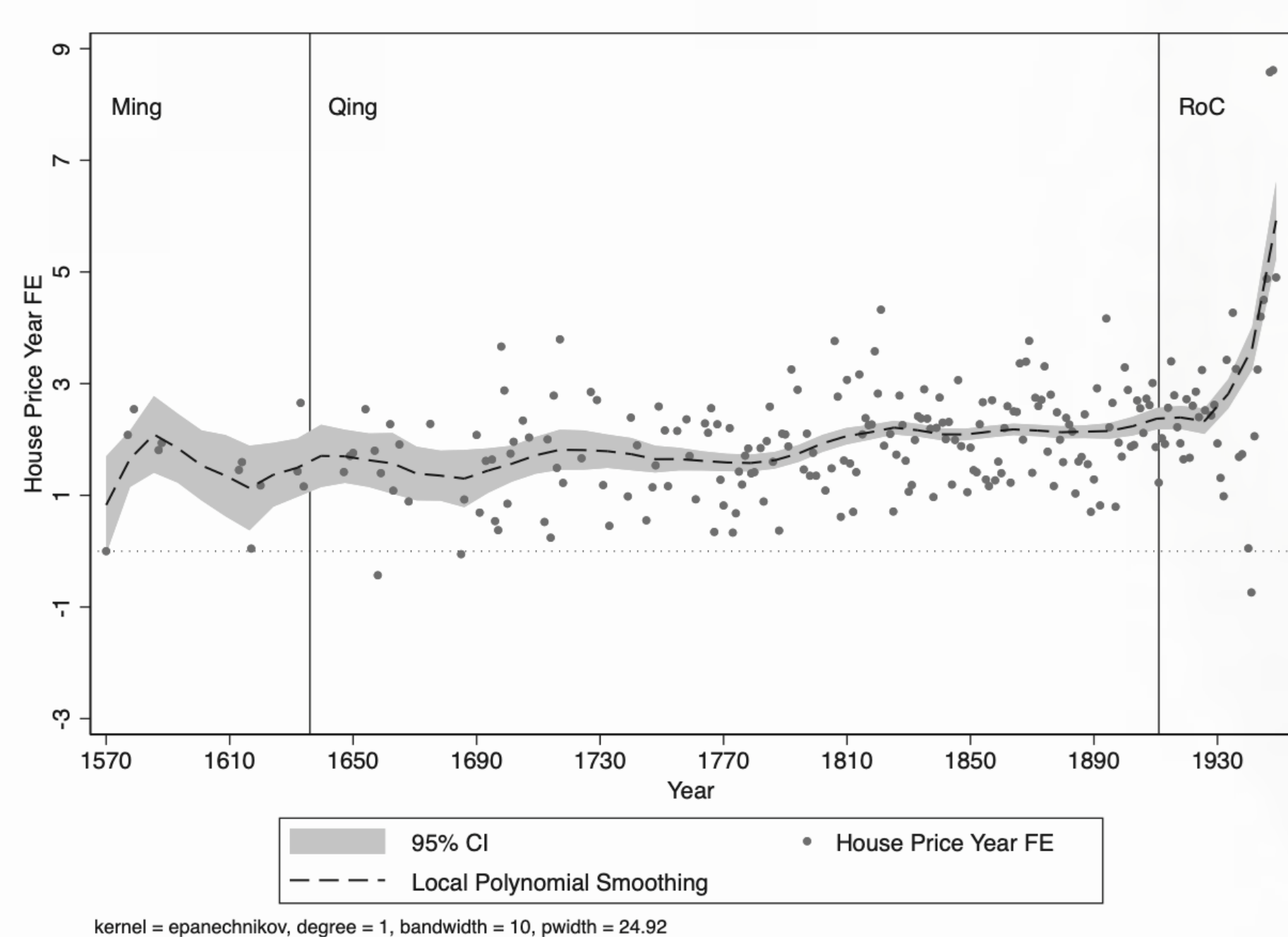
- Property owners in Huizhou preferred an east- or south-facing house:

House Orientation				
East	0.752* (2.13)	0.951* (1.69)		
West	-0.328 (-0.80)	0.487 (0.80)		
South	0.831* (2.40)	0.969* (1.96)		
Transaction Methods				
Currency	✓	✓	✓	✓
County FE	✓	✓	✓	✓
Decade FE			✓	
Year FE		✓		
Currency × Decade FE	✓	✓	✓	✓
County × Decade FE	✓		✓	
County × Year FE		✓		✓
N	678	678	172	172

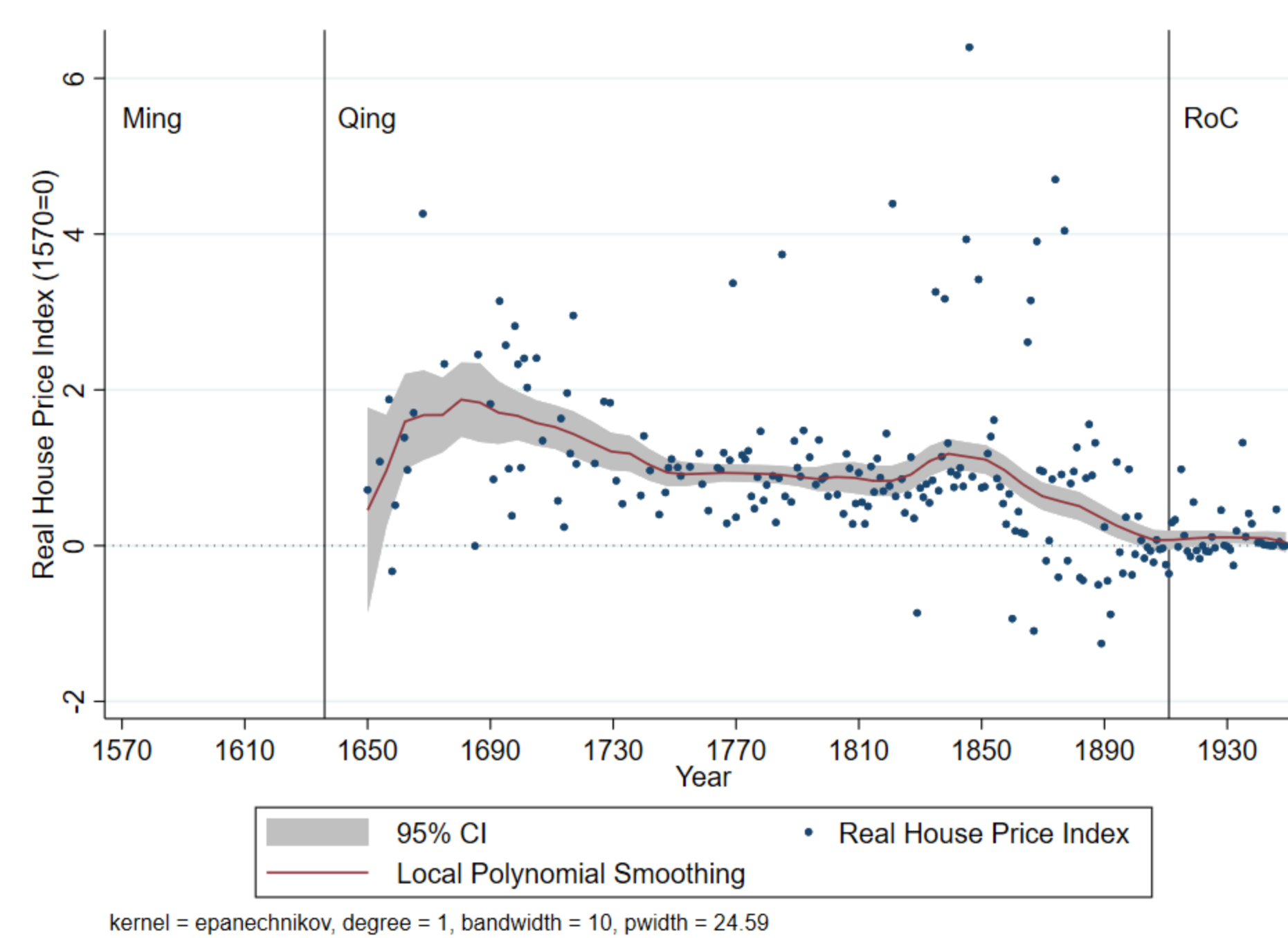
t statistics in parentheses
* p < 0.1, ** p < 0.01, *** p < 0.001

The Huizhou Index

- Nominal house price index:



- Real house price index:



- To construct the real index, the nominal prices are deflated using a consumer price index from Peng (2006), which is constructed based on price information of rice, cotton, and silk collected from the nearby Yangtze Delta region.

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