

Class Project: Cost of owning vs renting

FNCE 5352 Spring 2024

Due: February 20, 2024

Submission Guidelines: Email Submissions to Jinli Lyu (jinli.lyu@uconn.edu). Feel free to do this in any programming language that you like. Please submit your end results in excel.

Project Overview:

Ownership vs Rentership is always a topic of hot debate in the US newspapers. Using the FRED data, and below simplified assumptions, please come to conclusion on the ownership vs rentership debate for the last 30+ years.

1. Download the entire S&P CoreLogic Case-Shiller U.S. National Home Price Index (CSUSHPINSA) series from <https://fred.stlouisfed.org/series/CSUSHPINSA>
2. Download the entire 30-Year Fixed Rate Mortgage Average in the United States (MORTGAGE30US) from <https://fred.stlouisfed.org/series/MORTGAGE30US>
3. Plot the Home Prices and Average Monthly Mortgage Rate (beginning Jan-1-1987).
 - a. Home Prices = HPI Index Value*\$1,000
 - b. Calculate average monthly values for the 30-year mortgage rates. The print is weekly.
4. Calculate the assumed monthly rent for the corresponding monthly home price. The assumed monthly rent has a gross rental yield of 8.00%. (Gross Rental Yield = Annual Rent/Home Price)
5. Calculate the monthly mortgage payment amounts (P&I) assuming a 30 year mortgage on 90% of the value of the home for every period.
6. Home ownership also includes certain fixed expenses such as taxes, insurance and HOA fees (if applicable). The fixed expense equates to about 1.7% of the value of the home.
 - a. Calculate the monthly additional fixed expense burden on home owner.
 - b. Calculate the total cost of owning a home.
7. Compare in which periods it is cheaper to own a home vs renting a home?
8. Write down your conclusions and observations.
