Unit 30.4 - Capstone 3 - Project Proposal
Gayla Rios

Project Proposal: Housing Affordability and Debt in America

Problem Statement Formation
To investigate the relationship between housing affordability (both in terms of rent and home value) and overall debt at a county level in the United States. We aim to understand whether counties with higher housing costs also experience elevated levels of debt, thereby providing insights into the financial challenges faced by residents in different counties.

Context
With the ever-fluctuating real estate market and the diverse economic challenges faced by different regions, understanding the correlation between housing costs and debt can offer policymakers, financial institutions, and community organizers crucial insights. Housing is a significant expense for most households, and understanding its impact on overall financial health is pivotal.

Criteria for Success
1. Establish clear correlations or patterns between housing affordability metrics and overall debt.
2. Identify specific counties or regions facing heightened financial stress.
3. Provide actionable insights for stakeholders to address the identified challenges.

Scope of Solution Space
1. Geographical: All counties in the U.S., as covered by the datasets.
2. Temporal: Based on the available years in the datasets, presumably focusing on recent data to capture current trends.
3. Analytical: Descriptive statistics, correlation analysis, geospatial visualizations

Constraints
1. Data Limitations: The analysis is restricted to available metrics in the datasets. Some counties might have missing or incomplete data.
2. Causality: While the project might establish correlations, determining causality between housing costs and debt levels is more complex.
3. External Factors: Many external factors, like employment rates, local economies, or state-specific policies, might influence the observed patterns. Addressing all these in-depth is beyond the project's scope.

Stakeholders
>   Policy Makers - can use the insights to frame housing and financial policies.
>   Financial Institutions - insights might inform lending policies or financial products tailored for specific regions.
>   Real Estate Developers and Investors - to understand regions with potential financial stress, which might influence housing demand and prices.
>   Community Organizers - to develop targeted financial literacy or assistance programs.
>   Residents and Home Buyers - to make informed decisions about buying or renting in specific areas.

Unit 30.4 - Capstone 3 - Project Proposal
Gayla Rios

Data Sources

1. **Urban Institute Debt in America - County Level Overall Debt**
   - Source: [Urban Institute Dataset](#)
   - Contains information on overall debt levels for each county, with data categorized by various factors.

2. **Zillow Observed Rent Index by County**
   - Source: [Zillow Research Data](#)
   - Provides insights into the rental market, indicating housing affordability in terms of renting.

3. **Zillow Home Value Index by County**
   - Source: [Zillow Research Data](#)
   - Reflects the average home values, serving as a metric for housing affordability for home buyers.

Method & Solution Approach

1. Data Acquisition: Download datasets from the provided links.
2. Data Cleaning: Handle missing values, outliers, and standardize metrics.
3. Data Integration: Merge datasets based on FIPS (county identification).
4. Descriptive Analysis: Extract key metrics and trends for housing values, rents, and debt.
5. Correlation Analysis: Determine the strength and direction of the relationship between housing metrics and debt.
6. Geospatial Visualization: Map the data to visualize patterns and hotspots across the U.S.

Deliverables

1. Code - Data preprocessing, analysis, and visualization scripts.
2. Tableau Dashboard - An interactive visualization tool for stakeholders to explore the data.
3. Report/Slide Deck - Comprehensive overview of the findings, insights, and recommendations.

By the end of this project, stakeholders will have a clear visual and analytical perspective on the interplay between housing costs and debt levels across U.S. counties, enabling them to make informed decisions and interventions.