Determinants of Poverty in the U.S.

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Research Question

- **What factors have significant effects on Poverty Rates in the US?**
    - **How do individual factors such as marriage, education, and residence location affect Annual US Poverty Rates?**
    - **How do macroeconomic factors such as unemployment rates and Federal Monetary Policy affect Annual US Poverty Rates?**

With Annual Poverty Rates reaching levels as high as over 20% in the late 50s and early 60s, new President Lyndon B. Johnson made it the mission of hie presidency to start what he called a “War on Poverty”. He drafted the Economic Opportunity Act in 1964 among others to fight this war. As the 60s went on further, Poverty Rates fell to a range of 10-15%, which is where they have fluctuated between since. In our research, we look to see what factors affect these fluctuations in Poverty Rates.

Literature Review

The Causes of Regional Variations in U.S. Poverty: A Cross-County Analysis

- William Levernier, Mark D. Partridge, and Dan S. Rickman
- Published: 2000. *Journal of Regional Science*
    - Addresses how county poverty rates are affected by economic and demographic factors(*data: 1980-1990*)
    - Major Findings:
        - Greater population reduces poverty rates more in Nonmetropolitan counties, but not enough for lower rates than MSA counties
        - Recent employment growth reduces poverty rates in counties with greater shares of African Americans

Gaining Ground: Poverty in the Postwar United States

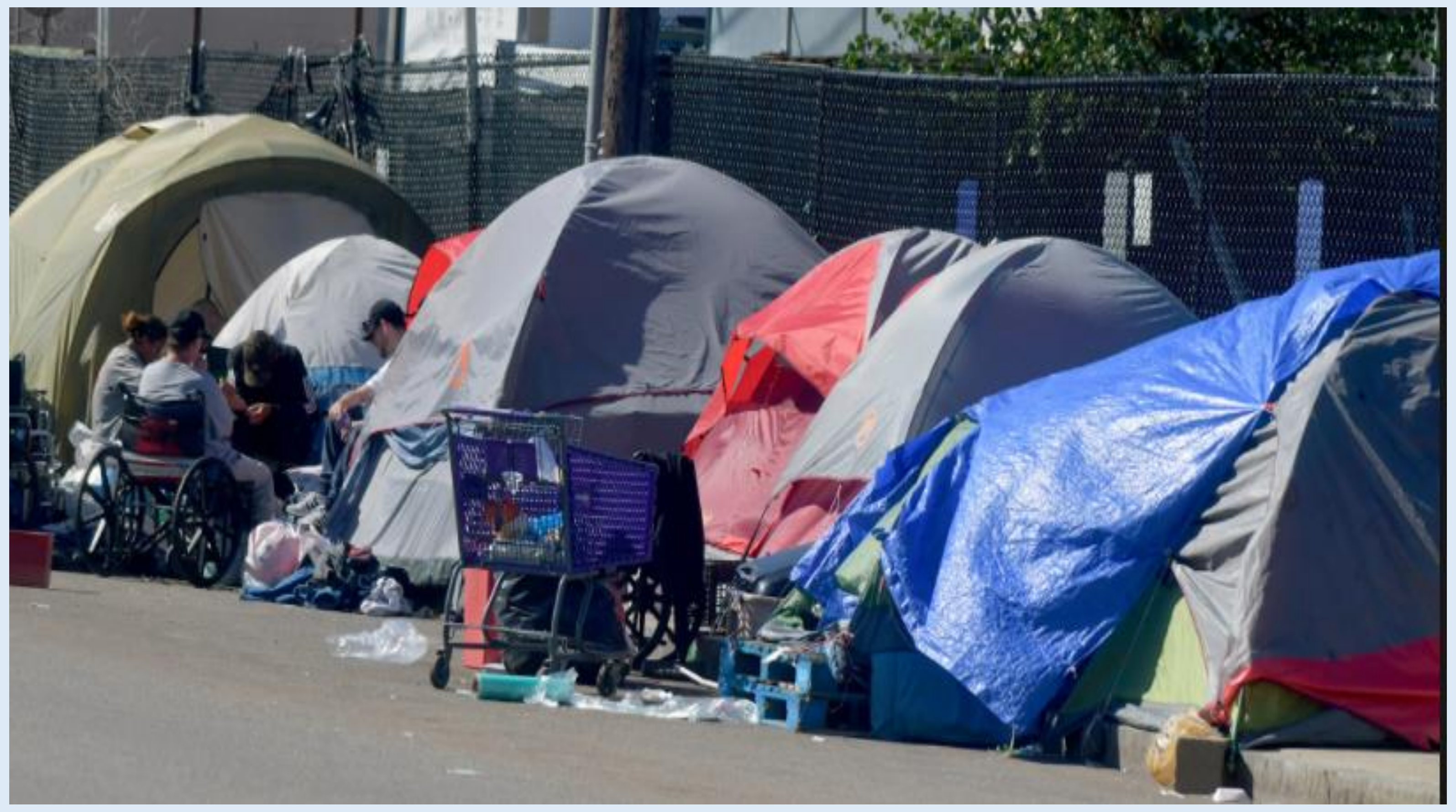
- Daniel T. Slesnick
- Published: 1993. *Journal of Political Economy*
    - Evaluates poverty rates using expenditure data from Consumer Expenditure Survey (*data: 1947-1989*)
    - Major Findings:
        - Substitution of total expenditure for income results in lower poverty rates
        - Census use of CPI-u and food equivalence scales understate progress of lowering poverty rates since 1960s

Poverty in America: Trends and Explanations

- Hilary W. Hoynes, Marianne E. Page, and Ann Huff Stevens
- Published: 2006. *Journal of Economic Perspectives*
    - Addresses how macro policies, family structures, and economic topics affect trends in poverty rates in past and currently (*data: 1959-2013*)
    - Major Findings:
        - Despite rising GDP per capita, there is a lack of lower poverty rates because of stagnant median wages
        - Antipoverty programs and changes in immigration do not play big role in affecting poverty rates

Data & Methodology

- Multiple Linear Regression used
- Dependent Variable: Percentage of US population in Poverty
- Independent Variables:
    - Households with a Single Female with No Spouse
    - Annual Marriage Rate
    - Annual Federal Unemployment Rate
    - Expansionary or Recession Economy (Annual)
    - Whether someone experiencing poverty lived inside or outside Principal cities
    - Annual Highschool Dropout Rate
    - Annual Federal Funds Rate
- Data representing the U.S. population from 1959 through 2020
- 477 observations
- Data compiled from U.S. Census Bureau, Federal Reserve Economic Database, USA Facts, Statista, and CDC



Model

$$\boldsymbol{logPOV} = \beta_0 + \beta_1 logFemNoSpouse + \beta_2 Married\% + \beta_3 \mathrm{Exp}\_Rec + \beta_4 \%Inside\ PrincipalCities + \beta_5 \%OutsidePrincipalCities + \beta_6 HSDrop + \beta_7 UnemRates + \beta_6 FFRates$$

<u>logFemNoSpouse</u>: Population of households in poverty with a single female with spouse represented as %

<u>Married%</u>: Annual US Marriage Rate

<u>UnemRate</u>: Annual unemployment rate in the US

<u>Exp_Rec</u>: Identifies whether the US experiencing an expansion or recession

<u>%InsidePrincipalCities</u>: Percentage of people in poverty who live inside a principal city

<u>%OutsidePrincipalCities</u> : Percentage of people in poverty who live outside a principal city

<u>HSDrop</u>: Annual Highschool Dropout rate in the US

Results

Variables	***Coefficients***	
Intercept	-0.7009	
log Fem No Spouse	0.1558	***
Married%	-0.2624	*
Exp_Rec	-0.0791	ns
%InsidePrincipalCities	0.0175	ns
%OutisdePrincipalCities	0.8992	***
HS Drop	21.3085	***
Unemployment Rates	-0.0002	ns
Fed Funds Rate	0.0152	ns

<u>Interpretations</u>:

- A 1% increase of households with a single female with no spouse will increase poverty by 0.16%
- A 1% increase in the annual marriage rate will decrease poverty by 0.26%
- Whether the US economy was experiencing an expansion or recession was found not to be significant with the utilized data and model
- The average population of people experiencing poverty inside cities was found not to be significant with the utilized data and model
- A 1% increase in people experiencing poverty living outside cities will increase poverty by 0.89%
- A 1% increase annual high school dropout rates with increase poverty by 0.21%
- Annual Federal Unemployment Rates was found not to be significant with the utilized data and model
- Annual Federal Unemployment Rates was found not to be significant with the utilized data and model

Conclusions

- Results of our regression indicate that logFemNoSpouse, %OutsidePrincipalCities, and HSDrop are significant at a 95% confidence level, and Married% is significant at a 90% confidence level
- Reasoning behind the negative correlation of poverty rates and the Marriage Rate, and positive correlation of poverty rates and population of households in poverty with a single female, could be that a household with two people could earn more income to cover fixed payments easier than a household with one could
- Our results show that an increased focus on keeping kids in school through high school and graduating could lead to sustained lowering of poverty rates in the long term
- Our results also show that an increase of government support to people living in poverty in rural areas could have positive effects in relieving financial woes seen by people living outside of cities oppose to people in cities