Age and Income: An Analysis of Economic Well-Being Across Generations

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Introduction and Description of Data

Introduction:

- Examining the interrelation of age and income among different generations.
- Insights to aid policy formulation for varied age demographics.
- Importance of considering education and work hours in economic analysis.

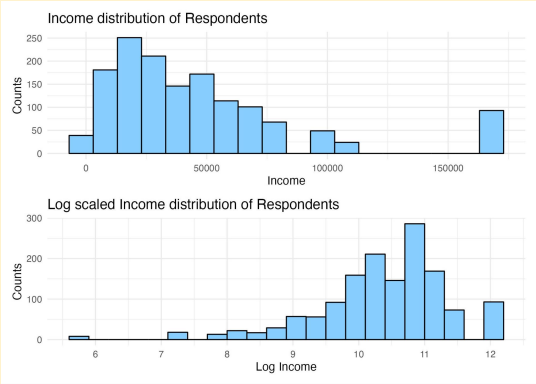
Brief Description of Data:

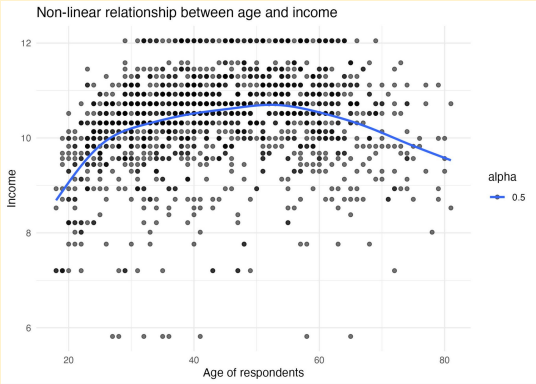
- Utilization of the General Social Survey (GSS) data.
- Representativeness of the U.S. adult population ensured through multistage sampling.
- Data encompassing social, economic, and demographic variables.

Key Modeling Decisions

- **EDA (Exploratory Data Analysis)**
  - Processing invalid responses/NAs
  - Log transformation
  - Categorical variables

- **OLS (Ordinary Least Squares Regression)**
  - Used to estimate the relationship between age, education, work hours, and income
  - Selection based on the linear nature of the initial model hypothesis
  - Utilized robust standard errors to account for potential heteroscedasticity





Key Modeling Decisions (Cont'd)

- **Stargazer table**
  - 4 models
  - Categorical variables

Table 1: The relationship between natural log income and age

	Dependent variable:			
	log_e_income			
	(1)	(2)	(3)	(4)
Age	0.014***	0.015***	0.013***	
	(0.002)	(0.002)	(0.002)	
Baby Boomers				0.748**
				(0.232)
Millennials				0.557*
				(0.228)
Gen X				0.844***
				(0.229)
Gen Z				0.112
				(0.234)
Hours Worked		0.025***	0.023***	0.021***
		(0.002)	(0.002)	(0.002)
HS			0.467***	0.497***
			(0.135)	(0.135)
Associate/Jr college			0.678***	0.677***
			(0.149)	(0.150)
Bachelor's			1.120***	1.140***
			(0.137)	(0.137)
Graduate			1.336***	1.335***
			(0.140)	(0.140)
Constant	9.701***	8.631***	8.036***	8.042***
	(0.091)	(0.132)	(0.159)	(0.265)
Observations	1,543	1,543	1,543	1,543
R^2	0.033	0.141	0.285	0.306
Adjusted R^2	0.032	0.140	0.282	0.302
Residual Std. Error	1.029 (df = 1541)	0.971 (df = 1540)	0.887 (df = 1536)	0.874 (df = 1533)
Note:				*p<0.05; **p<0.01; ***p<0.001

Results and Discussion

Results:

- Examined the interrelation of age and income among different generations.
- Statistically significant positive relationship between age and income.
- Variance in income explained by age, education, and work hours (adjusted R^2 ranges from 3.3% to 30.2%).

Discussion:

- Age is a consistent predictor of income, reflecting career progression.
- The complexity of income determinants requires multi-faceted policy approaches.
    - Importance of education and skill development in enhancing economic well-being.

Limitations:

- Possible issues of multicollinearity and non-linearity in the regression model.
- Heteroscedasticity and non-normal distribution of residuals observed.
- Potential omitted variable bias, not including factors like industry or geography.

Questions?