NLSY

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Abstract

In this study, we downloaded and analyzed the NLSY dataset. This dataset encompasses various parameters such as employment status, net family assets, wages, the industry of employment, and the occupation. We successfully transformed these data into a panel dataset format. Leveraging the provided sample weights for each year, we derived weighted average wages over time, average net household assets over time, and observed trends in employment status, occupation, and industry sectors. Our findings provide valuable insights into employment dynamics and financial stability patterns within the sampled population.

Contents

1 Description of Initial Data

The data for this study was sourced from the NLSY dataset. Specifically:

- **Industry and Occupation:** Downloaded from the "Employment Specific Characteristics" section of the NLSY.

- **Annual Wage and Earning & Employment Status Record:** Acquired from the "Summary Measurements by Year" section of the NLSY.

- **Assets:** Extracted from the "Income, Assets, and Program Participation" section of the NLSY.

These datasets provide a comprehensive view of the employment landscape, wage dynamics, and asset holdings of the sample population.

2 Tools and Libraries

For the data processing and analysis in this study, the following tools were employed:

- **Python**

- **Stata**

3 sampling weight

Description: This primary variable represents the sampling weight associated with the survey data. The sampling weight values range from 1 to 9999999 with 2 implied decimal places from 1979 to 2020.

4 Employment Status

4.1 Employment Status Codes

The dataset includes the following employment status codes along with their meanings:

- **Code 1:** WORKING - Individuals who are currently employed.

- **Code 2:** WITH JOB NOT AT WORK - Individuals with a job but currently not at work.

- **Code 3:** UNEMPLOYED - Individuals who are currently unemployed.

- **Code 4:** KEEPING HOUSE - Individuals primarily engaged in keeping house.

- **Code 5:** GOING TO SCHOOL - Individuals who are currently pursuing education.

- **Code 6:** UNABLE TO WORK - Individuals who are unable to work.

- **Code 7:** OTHER - Individuals with employment statuses not covered by the above categories.

- **Code 8:** IN ACTIVE FORCES - Individuals who are part of the active forces.

4.2 Calculating Weighted Employment Status

In this analysis, we aimed to compute the sum Weighted Employment Status of individuals. The process was as follows:

1. Firstly, we determined the weight for each individual in each year.

2. The weighted Employment Status of individuals were summed up for each year.

3. Lastly, we plotted the time series trend of the sum weighted Employment Status of individuals by year.
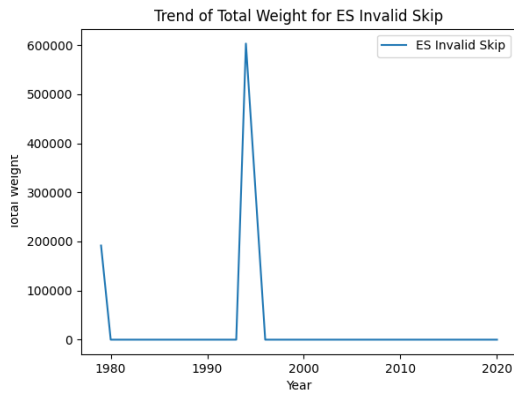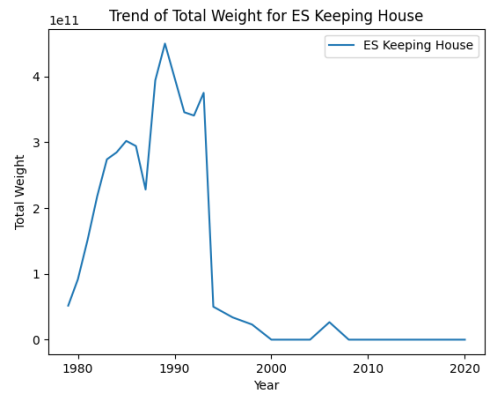
4.3 Visualize
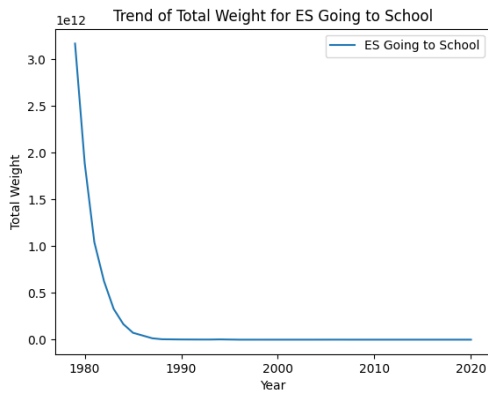
(a) Going to School
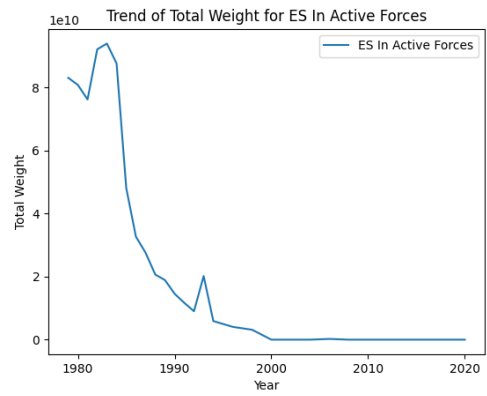
(b) In Active Forces

Figure 1: Employment Status: Going to School and In Active Forces
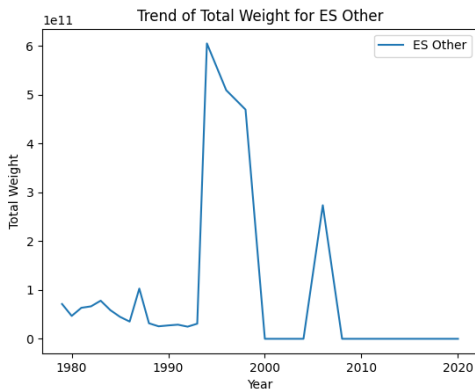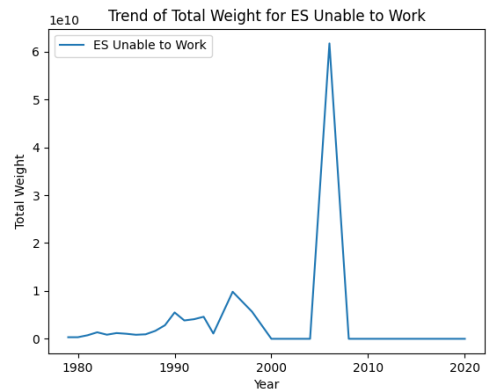

(a) Invalid Skip

(b) Keeping House

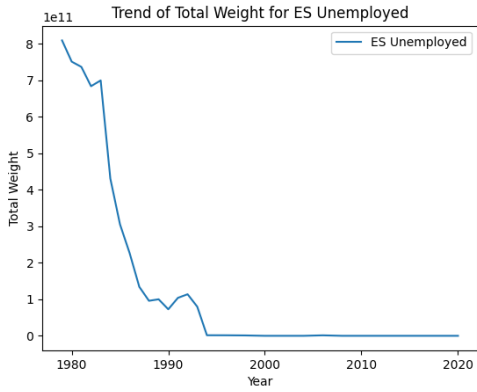Figure 2: Employment Status: Invalid Skip and Keeping House
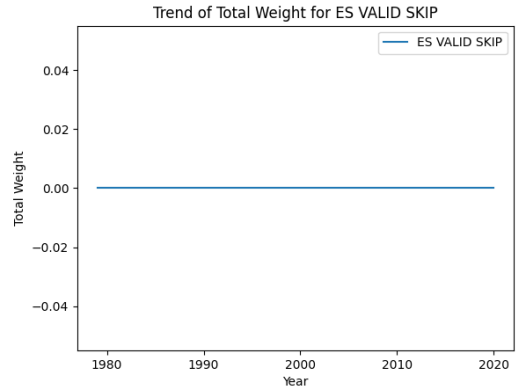

(a) Other

(b) Unable to Work

Figure 3: Employment Status: Other and Unable to Work
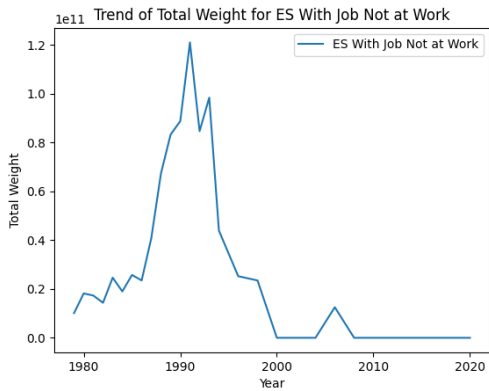
(a) Unemployed

(b) VALID SKIP

Figure 4: Employment Status: Unemployed and VALID SKIP

(a) With Job Not at Work

(b) Working

Figure 5: Employment Status: With Job Not at Work and Working

5   Annual Wage and Earnings

5.1   Data Overview

- **Data Source:** The data for annual wage and earnings was sourced from the "Summary Measurements by Year" section of the NLSY for the survey year 1979.

- **Primary Variable:** TOTAL INCOME FROM WAGES AND SALARY IN PAST CALENDAR YEAR.

- **Original Question:** Excluding military service income, the respondent was asked about the total income received from wages, salary, commissions, or tips from all jobs in 1978, before any deductions.

- **Universe:** The data covers respondents who have had a child, are at least 18 years old, are currently enrolled in college, live outside of their parental home, have been married, or are currently on active duty in the military or have served in the military in the past calendar year.

5.2   Calculating Weighted Average Income

In this analysis, we aimed to compute the weighted average income of individuals based on annual weights. The process was as follows:
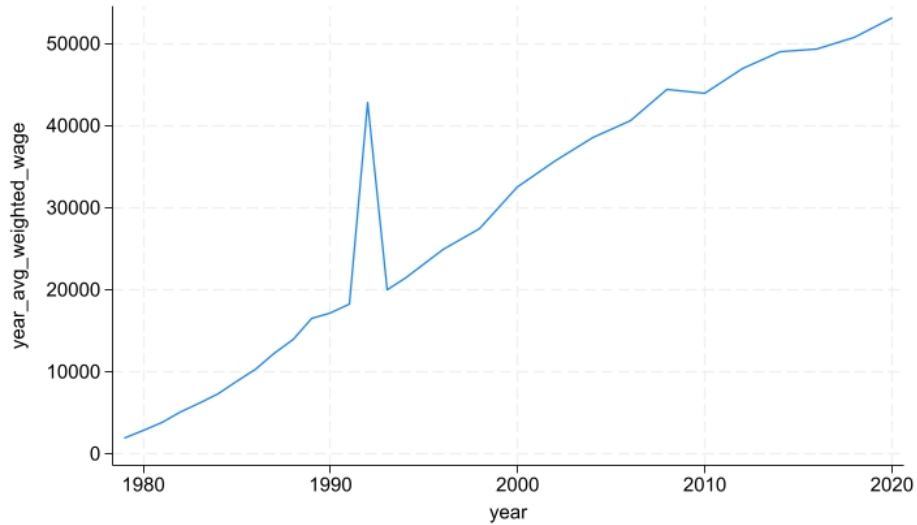
1. Firstly, we determined the weight for each individual in each year.

2. We then multiplied each individual's weight by their income to obtain the weighted income.

3. The weighted incomes of all individuals were summed up for each year.

4. By dividing the total weighted incomes by the sum of weight of individuals, we computed the weighted average income for each year.

5. Lastly, we plotted the time series trend of the weighted average income.

This approach provided us with a clearer picture of the average income dynamics while accounting for the annual weights associated with each individual.

6   Asset

6.0.1   Data Description

- **Primary Variable:** Family Net Wealth (Truncated).

- **Original Question Name:** *CREATED Created Variable Total Net Family Wealth. This variable represents the total net wealth for the family, calculated by summing all asset values and subtracting all debts. The top 2 percent of all values are top-coded.

- **Universe:** All respondents.

6.1 Calculating Weighted Average Assets

In this analysis, our objective was to compute the weighted average assets of individuals based on annual weights. The process undertaken was as follows:

1. Firstly, we determined the weight for each individual in each year.

2. We then multiplied each individual's weight by their assets to obtain the weighted assets.

3. The weighted assets of all individuals were aggregated for each year.

4. By dividing the total weighted assets by the sum weight of individuals of year, we computed the weighted average assets for each year.

5. Lastly, we visualized the time series trend of the weighted average assets.

   Using this method, we were able to gain a comprehensive understanding of the average assets dynamics, considering the annual weights attributed to each individual.

Mean Weighted Asset by Year