Documentation for the nurses web tool

Benjamin Noland

Contents

1 Introduction

This web tool allows you to explore trends in union membership and union contract coverage for registered nurses in the United States. You can use the tool to generate trend plots and chloropleth maps showing how these quantities change over time, filtered and/or grouped according to a variety of demographics (detailed below). The tool uses data derived from the Current Population Survey (CPS) public use microdata. For background information on the CPS, see [ADD REFERENCE].

2 Details of the data

The tool operates on data derived from the Current Population Survey (CPS) public use microdata (see [ADD REFERENCE] for information on the raw CPS data). Each entry in the data used by the tool corresponds to an individual interviewed as part of the CPS, and includes various demographic data on that individual, as well as flags indicating whether the individual is a union member or covered by a union contract. Each entry also includes the year in which the individual was interviewed, and a statistical weight used to calculate union membership and union contract coverage proportions.

The following are descriptions of the variables in the data used by the tool, including the possible values or levels that a particular variable can assume:

`year` — The year the individual was interviewed.

`sex` — The individual's sex. This is derived from the CPS variable `PESEX`.

Levels: `Male`, `Female`

`member` — Union membership flag. `TRUE` if the individual is a union member, and `FALSE` otherwise.

`covered` — Union contract coverage flag. `TRUE` if the individual is covered by a union contract, and `FALSE` otherwise.

`age` — The individual's age. This is derived from the CPS variable `PEAGE` or, if that is unavailable, the CPS variable `PRTAGE`.

`age_group` — The individual's age group (16-24, 25-54, or 55 and over). This is derived from `age`.

Levels: `16-24`, `25-54`, `55 and over`

`race` — The individual's race. This is derived from the CPS variable `PTDTRACE`. It has levels for some of the more common races, and a level `Other` for other races. The levels of this variable are less fine-grained than those of `PTDTRACE` (see the CPS documentation for details).

Levels: `White`, `Black`, `American Indian (Alaskan Native)`, `Asian`, `Hawaiian/Pacific Islander`, `Other`

`hisp`	Whether or not the individual is Hispanic. This is derived from the CPS variable `PEHSPNON`. **Levels:** `Hispanic`, `Non-Hispanic`
`educ`	The individual's level of education. This is derived from the CPS variable `PEEDUCA`. The levels of this variable are less fine-grained than those of `PEEDUCA` (see the CPS documentation for details). **Levels:** `No high school`, `Completed high school`, `Some college`, `Associate degree`, `Bachelor's degree`, `Graduate degree`
`citizen`	The individual's US citizenship status. This is derived from the CPS variable `PRCITSHP`. The levels of this variable are less fine-grained than those of `PRCITSHP` (see the CPS documentation for details). **Levels:** `US native`; `Foreign-born`, `citizen`; `Foreign-born`, `non-citizen`
`state`	The US state (including DC) where the individual resides. This is derived from the CPS variable `GESTFIPS`. **Levels:** (The two letter abbreviations for each of the 50 states, including DC)
`weight`	Statistical weight. Used to calculate union membership and union contract coverage proportions.

3 Working with the web tool

The web tool provides you with two ways to explore union membership and union contract coverage: by examining trends and by examining state-wise patterns. You can filter the data according to the levels of many of the variables described above, and you can download the data if you desire to conduct more customized analysis.

3.1 Overview of the interface

When you first open the web tool, you are presented with the following interface.

The various components of the interface are described in the next few subsections.

3.1.1 The filtering tools

At the left side of the page you will notice a collection of drop down menus, each of which corresponds to a variable in the data used by the tool (which is described above). These are the *filtering tools*. The web tool operates on the subset of the underlying data selected using the filtering tools.

Clicking on a drop down menu in the filtering tools will reveal the levels of that variable currently included in the subset of the data being used by the web tool, displayed using checkboxes, slidebars, or other selection widgets. For example, in the case of checkboxes, a checked box indicates that the corresponding level of the variable is currently included; an unchecked box indicates that it is not included.

3.1.2 The Trends tab

Selecting the Trends tab at the top of the screen brings you to an interface for exploring trends in union membership and union contract coverage. This interface is described in detail below.

3.1.3 The States tab

Selecting the States tab at the top of the screen brings you to an interface for creating chloropleth maps for displaying union membership and union contract coverage per state. This interface is described in detail below.

3.1.4 The Data tab

Selecting the Data tab allows you to view and download the data selection currently being used by the tool. As described above, you can modify the data selection using the filtering tools at the left side of the page. The features of this tab are described in detail below.

3.2 Working with trends

If you select the Trends tab, you will be presented with the following interface:

This interface allows you to explore trends in union membership and union contract coverage. There are three sub-tabs: Plots, for viewing the trend plots; Data, for viewing the data used to construct the trend plots; and Options, for setting options related to the trend plots.

To illustrate typical usage, we will work through several examples.

1. As a first example, let us create some basic trend plots showing union membership and union contract coverage trends for black, female nurses in the west coast states (California, Oregon, and Washington).

2. For our second example, we will create trend plots showing the difference in union membership and the difference in union contract coverage among nurses in the age group 25-54 and nurses in the age group 55 and over.

3. In our third and final example we will create trend plots showing the difference in union membership and the difference in union contract coverage among nurses in the tri-state area (New York, New Jersey, and Pennsylvania) who are US native, foreign-born citizens, and foreign-born non-citizens.

3.3 Working with maps

If you select the States tab, you will be presented with the following interface:

This interface allows you to create chloropleth maps displaying union membership and union contract coverage per state over the years selected. There are three sub-tabs: Maps, for viewing the chloropleth maps; Data, for viewing the data used to construct the chloropleth maps; and Options, for setting options related to the chloropleth maps.

To illustrate typical usage, we will work through several examples.

1. As a first example, we will create a chloropleth map showing union membership and union contract coverage among Hispanic nurses in the west coast states (California, Oregon, and Washington), over the years 2010 to 2015.

2. For our second example, we will create a chloropleth map showing union membership and contract coverage among all nurses in all states in the year 2011.

3.4 Examining the data selection