# README for Beach and Hanlon “Culture and the Historical Fertility Transition” Replication

## Overview

## This document outlines the various components of the Culture and the Historical Fertility Transition replication package. We begin with a list of data sets and their sources. Next, we outline the software requirements. The programs to generate the results are split between “processing” programs, which prepare the data for analysis and “analysis” programs, which conduct the analysis. The instructions to the replicators outline the steps necessary to conduct the analysis. We end with a table that maps the various analysis programs to the corresponding manuscript figure/table.

## Dataset list

All of the data needed to replicate “Culture and the Historical Fertility Transition” are saved in the “Raw Data” directory. Below is a table listing each dataset and its source. The code to combine the data and generate the analysis is described later.

|  |  |
| --- | --- |
| **Data file** | **Notes** |
| mitchell\_data.dta | Authors’ transcription of Mitchell (2003). |
| newspaper\_hits.xlsx | Author’s tabulations from various newspaper database websites, as outlined in excel sheet. |
| **Canada Data (contained in “Canada” subdirectory)** | |
| Canada\_1881\_Raw\_IPUMS\_00001.dta | This is an extract of the 1881 Canadian census from IPUMS.org, which we use to generate our microdata results. |
| County\_controls.dta | Series digitized by the authors from scanned copies of original census manuscripts obtained from HathiTrust, Google Books and other online sources |
| CountyXCensus\_pop\_cats.dta | Series digitized by the authors from scanned copies of original census manuscripts obtained from HathiTrust, Google Books and other online sources |
| Henripin\_Canada\_birth\_rates.xlsx | Authors’ transcription of Henripin (1968). |
| province\_county\_lat\_lon.dta | Latitude and longitude data for counties obtained from Google Maps |
| **England and Wales Data (contained in “England\_and\_Wales” subdirectory)** | |
| 1895\_Directory\_with\_BNA.dta | Authors’ transcription of Mitchell’s 1895 Newspaper Press Directory. |
| BNA\_Index.xlsx | Author’s tabulations from britishnewspaperarchive.co.uk |
| BNA\_Transcribed\_Sample | This folder contains a sample of news articles, as transcribed by authors’ research team. |
| district\_births\_data\_standardized.dta | From annual reports of the Registrar General, aggregated into time-consistent registration districts. |
| district\_pop\_by\_age\_combined.dta | District-level population tabulations from each census year based on published census reports. |
| district\_shapefiles | This folder contains the district shapefiles for England and Wales. |
| EW\_District\_Chars.dta | This dataset provides district-level data from the following sources:   * District latitude and longitude for main town or district center (if no main town) from Google Maps * “articles” data based on keyword queries using British Newspaper Archive. * “new\_papers” series and “established papers” are based on the 1895 Newspaper Press Directory. * The population series are from published census reports * Births, marriages, and deaths from Registrar General’s reports. * Local economic structure data from the Census |
| marriage\_data\_district\_standardized.dta | From annual reports of the Registrar General, aggregated into time-consistent registration districts. |
| Newspaper\_Monthly\_Queries.dta | Author’s tabulations from britishnewspaperarchive.co.uk |
| Newspaper\_Yearly\_Queries.dta | Author’s tabulations from britishnewspaperarchive.co.uk |
| WS\_a3\_1\_birth\_rate\_series.dta | Transcribed from Wrigley and Schofield, 1981. |
| **South Africa Data (contained in “South\_Africa” subdirectory)** | |
| South\_Africa\_1875\_1891.dta | Data digitized by the authors from scanned copies of the original census manuscripts |
| **U.S. Data (contained in “United\_States” subdirectory)** | |
| 1880\_US\_IPUMS\_extract.dta | This is an 1880 extract of U.S. microdata from ipums.org |
| Newspaper\_Mentions.xlsx | Authors calculations from various newspaper database websites. |

### Software Requirements

Stata (code was last run with version 16.1) and the following user-generated commands, which are currently stored in the root ado folder of the replication package.

* + unique
  + shp2dta
  + eststo, estadd, estout, esttab (all from st0085\_2 package)
  + ftools
  + reghdfe
  + psacalc
  + ivreg2
  + ranktest
  + ivreghdfe
  + sutex
  + texsave
  + geodist
  + spmap

## Description of programs

* Programs in the Processing folder prepare data for analysis.
* Programs in the Analysis folder generate all tables and figures.
* The program Analysis/Analysis\_Master\_Replication.do will run everything in the correct order.. Each program called from master.do identifies the table or figure it creates (e.g., T1\_Canada\_agg\_main.do). Output files are called appropriate names (T1\_Canada\_agg\_main.tex) and should be easy to correlate with the manuscript.

## Instructions to Replicators

* Analysis/Analysis\_Master\_Replication.do needs to be modified to include the user’s “root” directory (where the replication folder is stored).
* Run Analysis/Analysis\_Master\_Replication.do to generate all of our results and save them in the Results folder.

### Details

* Each table and figure is saved and run as a separate program.
* If the user wants to run a program individually it is crucial to run the processing files from “Analysis\_Master\_Replication.do”. This is where the control variables are defined as a global that can be called on in subsequent do files.
* The programs were last run top to bottom on April 30, 2022.

## List of tables and programs

The below table lists the figures and tables in the order in which they appear in the manuscript and the appendix. The table includes the program name/location and the output files. The starting directory for all program locations is the “Analysis” folder. Unless otherwise stated, results are saved in the “Results” folder.

|  |  |  |  |
| --- | --- | --- | --- |
| Figure/Table | Program | Output file(s) | Note |
| Figure 1 | F1\_ew\_national\_time\_series.do | F1\_ew\_national\_time\_series\_a.pdf F1\_ew\_national\_time\_series\_b.pdf F1\_ew\_national\_time\_series\_c.pdf | Figure 1 consists of 3 panels and each panel is exported as a separate PDF. |
| Figure 2 | F2\_Canada\_time\_series.do | F2\_canada\_time\_series.pdf |  |
| Table 1 | T1\_Canada\_main\_agg.do | T1\_Canada\_agg.tex |  |
| Table 2 | T2\_Canada\_microdata.do | T2\_Canada\_mico.tex |  |
| Figure 3 | F3\_keyword\_time\_series.do | F3\_BNA\_article\_time\_series.pdf |  |
| Figure 4 | F4\_US\_keyword\_time\_series.do | F4\_US\_article\_time\_series.pdf |  |
| Table 3 | T3\_EW\_Balance.do | T3\_EW\_Balance.tex |  |
| Figure 5 | F5\_EW\_DD\_Directories.do | F5\_EW\_DD\_Newspapers.pdf |  |
| Table 4 | T4\_EW\_DD.do | T4\_EW\_Base.tex |  |
| Figure 6 | F6\_EW\_Falsification\_DD.do | F6\_EW\_Falsification.pdf |  |
| Table 5 | T5\_EW\_IV.do | T5\_EW\_IV.tex |  |
| Figure 7 | F7\_EW\_births\_long.do | F7\_ew\_cbr\_long.pdf |  |
| Figure 8 | F8\_EW\_Scotland\_graph.do | F8\_EW\_Scotland\_graph.pdf |  |
| Figure 9 | F9\_England\_France\_Germany.do | F9\_England\_France\_Germany.pdf |  |
| Figure 10 | F10\_Other\_Euro\_Fertility.do | F10\_Other\_Euro\_Fertility.pdf |  |
| Table 6 | T6\_Canada\_agg\_sum\_stats.do | T6\_Canada\_agg\_sum\_stats.tex |  |
| Table 7 | T7\_Canada\_micro\_sum\_stats.do | T7\_Canada\_micro\_sum\_stats.tex |  |
| Table 8 | T8\_Canada\_origin\_comparisons.do | T8\_Canada\_origin\_comparisons.tex |  |
| Table 9 | T9\_Canada\_agg\_robust.do | T9\_Canada\_Robust.tex |  |
| Table 10 | T10\_Canada\_spatial\_SE.do | T10\_Canada\_spatial\_SE.tex |  |
| Table 11 | T11\_Canada\_micro\_robust.do | T11\_Canada\_Micro\_Robust.tex |  |
| Table 12 | T12\_T13\_US\_Sum\_Stats.do | T12\_US\_Sum\_Stats.tex |  |
| Table 13 | T12\_T13\_US\_Sum\_Stats | N/A | Tabulations appear in results window of Stata |
| Table 14 | T14\_US\_Microdata.do | T14\_US\_Microdata.tex |  |
| Table 15 | T15\_US\_microdata\_windows.do | T15\_US\_microdata\_windows.tex |  |
| Table 16 | T16\_SA\_Summary\_Stats.do | T16\_SA\_Summary\_Stats.tex |  |
| Table 17 | T17\_SA\_main\_results.do | T17\_SA\_main\_results.tex |  |
| Table 18 | T18\_SA\_Spatial\_SE.do | T18\_SA\_Spatial\_SE.tex |  |
| Figure 11 | N/A |  | No replication code. Figure is a screenshot of raw data. |
| Figure 12 | N/A |  | No replication code. Figure is a screenshot of raw data. |
| Figure 13 | N/A |  | No replication code. Figure is a screenshot of raw data. |
| Figure 14 | F14\_newspaper\_databases.do | F14\_newspaper\_databases.pdf |  |
| Figure 15 | F15\_EW\_news\_maps.do | F15\_EW\_news\_maps\_a.pdf F15\_EW\_news\_maps\_b.pdf | Figure consists of two panels. Each panel is exported as separate PDF. |
| Table 19 | T19\_20\_BNA\_Selection.do | T19\_BNA\_entry.tex |  |
| Table 20 | T19\_20\_BNA\_Selection.do | T20\_BB\_Article\_Ratio.tex |  |
| Figure 16 | N/A |  | Figure 16 is a screenshot of an actual article. No code necessary. |
| Figure 17 | F17\_BNA\_map.do | F17\_BNA\_map.pdf |  |
| Table 21 | T21\_BNA\_classification.do | T21\_BNA\_classification.tex |  |
| Table 22 | N/A |  | These word stems were prepared by an outside vendor using newspaper article transcriptions provided by the authors (transcriptions available in Raw\_Data/England\_and\_Wales/BNA\_Transcribed\_Sample |
| Table 23 | T23\_T24\_EW\_Sum\_Stats.do | T23\_EW\_Sum\_Stats\_Full.tex |  |
| Table 24 | T23\_T24\_EW\_Sum\_Stats.do | T24\_EW\_Sum\_Stats\_DD.tex |  |
| Table 25 | T25\_EW\_Alt\_Windows.do | T25\_EW\_Alt\_Windows.tex |  |
| Table 26 | T26\_EW\_Spatial\_SE.do | T26\_EW\_Spatial\_SE.tex |  |
| Table 27 | T27\_EW\_Robust.do | T27\_EW\_Robust.tex |  |
| Figure 18 | F18\_EW\_Event\_Study.do | F18\_EW\_Event\_Study.pdf |  |
| Figure 19 | F19\_EW\_Marriages\_Births\_AR.do | F19\_EW\_Marriages\_Births\_AR.pdf |  |
| Table 28 | T28\_EW\_Marriages.do | T28\_EW\_Marriages.tex |  |
| Figure 20 | F20\_EW\_Mar\_Counterfactual.do | F20\_EW\_Mar\_Counterfactual.pdf |  |
| Table 29 | T29\_EW\_Mar\_Counterfactual.do | T29\_EW\_Mar\_Counterfactual.tex |  |

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