PROJECT PLAN: MONTHLY CARE ECONOMY REPORT

ABSTRACT

The Kansas Population Center at the University of Kansas serves the greater community by acting as the caretakers, planners, and developers of The Care Board, a web dashboard designed to increase public awareness of statistics related to caregiving within the U.S. The KPC fulfills this mission by partnering with leading academics, researchers, and data scientists to construct novel statistics for public dissemination on the dashboard. The dashboard is currently updated with annual data from the Annual Social and Economic Supplement. The goals of this project are to expand the scope of the Care Board data reporting by creating a monthly data report that utilizes Current Population Survey data. The specific goals of this project are as follows: (1) Examine the CPS survey to obtain questions related to the Care Economy; (2) Create a pipeline of data analytics that downloads these questions, transforms variables as appropriate, and analyzes the data to understand trends; (3) develop a "Care Economy Statistical Update" template that can be utilized to share relevant data every month.

1 INTRODUCTION

The Kansas Population Center serves as the caretaker of The Care Board (www.thecareboard.org), an online dashboard designed to spread awareness of statistics related to the Care Economy. The Care Economy represents the often invisible economic engine that keeps our homes, communities, and broader economy running. From raising children to supporting aging loved ones, care work fuels daily life, yet often remains unseen and undervalued. The Care Economy represents the vast network of time, effort, and resources dedicated to sustaining the well-being of the wider population, encompassing both paid care provided by professionals and unpaid care, which is often invisible and often done within the context of the home. The Care Board's mission is to highlight the essential role of care in the community by gathering data and serving as a hub for topical discourse.

The current dashboard is updated using yearly data from the American Social and Economic Supplement (ASEC) and the American Time Use Survey (ATUS). While this data is useful for the spatial components and focuses on unpaid caregiving required for the dashboard, the KPC believes a strategic opportunity is being missed by utilizing yearly instead of monthly data. To further expand the discussion of the Care Economy, the KPC aims to develop a monthly statistical briefing utilizing data from the Current Population Survey (CPS), which asks similar, though not as comprehensive, questions as the ASEC. Similar to how the Bureau of Labor Statistics (BLS) releases a monthly jobs report, to address economy-related issues, the KPC wishes to release a monthly Care Economy Briefing to address care economy-related issues. The KPC currently envisions this as a one- to three-page statistical abstract, focusing on time trend visualizations in a format that is easy to share on social media and displays monthly trends on important care economy-related issues.

The goals of this project are three-fold: (1) Identify the relevant survey questions related to the Care Economy in the Current Population Survey, and determine the most important/relevant statistics to include in a condensed briefing; (2) develop a statistical pipeline to take raw CPS data, clean/transform the data, and export quality visualizations capable of being share on social media. This pipeline needs to be robust enough that it can be run each month when new CPS data is released with minimal changes required; (3) Develop a professional-looking template to be used with data visualizations to present the monthly statistics. This template should adhere to a standard format that allows for easy

inclusion of visualizations and requires minimal transformation for monthly release.

2 Baseline or Initial Analysis

The Current Population Survey is available through the Integrated Public Use Microdata Series (IPUMS) [https://cps.ipums.org/cps/]. This survey contains over 200 questions, some of which are relevant, but many are not. This data can be downloaded directly via an API. The KPC currently maintains a code file that downloads a series of pertinent questions. However, nothing is currently being done with this data as it is not presented on the dashboard and is too large for easy dissemination. Initial analysis should focus on the questions that are most relevant to understanding caregiving trends nationwide.

3 Final Analysis

The final analysis will include a code file, in either R or Python, that conducts the following steps: (1) uses the IPUMS API to pull relevant data from the IPUMS website; (2) appropriately transforms the data; (3) Creates multiple visualizations showing the trends of the variables at a monthly level; (4) outputs these visualizations in a good looking file capable of being shared on social media. The code pipeline should be robust enough to handle new data from each month without requiring significant updates. Utilization of data visualization techniques will be the key statistical technique required.

4 Final Goals & Evaluation

- Think critically about the Current Population Survey Data and present Ideas and Justification for the top few questions to be utilized. Examples might include…
    - Labor force participation rates of mothers and fathers compared to childless men/women.
    - Number of workers skipping work for caregiving reasons.
    - Number of workers in Different Care Economy Sectors
- Develop a code pipeline in R or Python that goes from the step of downloading the data utilizing an API to creating time trend visualizations of the appropriate data.
    - Pipeline will transform raw data, including renaming/combining variables and categories.
    - Code will utilize data visualization packages (i.e., ggplot or matplotlib) to create good-looking visualizations capable of being displayed to the public.
- Generate a template for data presentation that includes the generated visualizations professionally and attractively, which can be shared with the public.
    - Template should be focused around the data visualizations, NOT words describing the data.
    - Template should be in a condensed and shareable format (i.e., 1-3 pages max) to be shared via social media and to journalists/policymakers.

5 Related Work

The main work from this will continue the themes of the Care Board and its ongoing data work.

Misty Heggeness, Joseph Bommarito, and Lucie Prewitt. The Care Board: Version 1.5 [dataset]. Lawrence, KS: Kansas Population Center, 2025. https://thecareboard.org.

6 Data & Technical Requirements

The final code file must be written in R or Python to align with the larger code flow of the Care Board. While advanced packages and statistical modeling are not required for this project, familiarity with visualization processes in R or Python (such as ggplot or matplotlib) is useful. In an ideal world, the visualization outputs would feed directly into a Markdown file, creating the final document; however, this might not be feasible given design/style decisions made during the project. As such, markdown knowledge may be useful, but is not required.