Package 'HiddenSafetynet2025'

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Type Package

Title US Farm Safety Net Lab

Version 0.0.0.9000

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Description This repository centralizes research outputs, analytical tools, and resources for exploring and evaluating the United States agricultural safety net programs. It supports analysis of key programs including the Federal Crop Insurance Program (FCIP), the Noninsured Crop Disaster Assistance Program (NAP), Price Loss Coverage (PLC), Agricultural Risk Coverage (ARC), and various ad-hoc disaster assistance programs.

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URL https://github.com/you/HiddenSafetynet2025

BugReports https://github.com/you/HiddenSafetynet2025/issues

Encoding UTF-8

Roxygen list(markdown = TRUE)

RoxygenNote 7.3.2

VignetteBuilder knitr

Depends R (>= 4.1.0)

Imports data.table, rfcip, future.apply

Remotes github::dylan-turner25/rfcip, github::UrbanInstitute/urbnmapr, github::dylan-turner25/rfsa

Suggests dplyr, tidyr, knitr, rmarkdown, mockery, withr, testthat (>= 3.0.0)

LazyData true

Cite-us If you find it useful, please consider staring the repository and citing the following studies
- Tsiboe, F. and Turner, D. (2025). ``Incorporating buy-up price loss coverage into the United States farm safety net." Applied Economic Perspectives and Policy.
- Tsiboe, F., et al. (2025). ``Risk reduction impacts of crop insurance in the United States." Applied Economic Perspectives and Policy.
- Gaku, S. and Tsiboe, F. (2024). Evaluation of alternative farm safety net program combination strategies. Agricultural Finance Review.

Contents

`clean_rma_sobtpu` *Clean and enrich RMA Statement of Business (SOB) data*

Description

Processes RMA Statement of Business (SOB) data to produce an analysis-ready dataset with aggregated core insurance metrics and **shares** of Supplemental Coverage Option (SCO) and Enhanced Coverage Option (ECO) by coverage level.

Usage

```
clean_rma_sobtpu(
  study_env = setup_environment(),
  output_directory = "data-raw/data"
)
```

Arguments

`study_env`	A list-like environment produced by `setup_environment()` that must include `year_beg` and `year_end` (inclusive integers). Defaults to `setup_environment()`.
`output_directory`	Character string specifying the directory where the processed `.rds` file should be saved. Defaults to `"data-raw/data"`. The file will be named `"cleaned_rma_sobtpu.rds"`.

Details

The output file will be written to `file.path(output_directory, "cleaned_rma_sobtpu.rds")`. The directory is created if it does not exist.

Value

A character message describing the processed year range and number of output rows; the main side effect is writing an `.rds` file to disk.

`setup_environment` *Setup Project Environment*

Description

Loads project settings, creates directories, sets R options and a random seed, and stores the analysis year range for the supplemental protection project.

Usage

```
setup_environment(year_beg = 2015, year_end = 2024, seed = 1980632)
```

Arguments

`year_beg`	Integer. Beginning year of the analysis (default: 2015).
`year_end`	Integer. Ending year of the analysis (default: 2024).
`seed`	Integer. Random seed for reproducibility (default: 1980632).

Details

This function:

- Detects the operating system and sets a root `fastscratch` directory:
  - Windows - `"C:/fastscratch"`
  - Linux/macOS - `"/fastscratch/<username>"`
- Creates subdirectories for simulation results, expected values, draw-farm, and draw-cost outputs under `fastscratch/HiddenSafetynet2025/output/`.
- Ensures `data-raw/data`, `data-raw/output`, and `data-raw/data/agentdata` exist in the project root.
- Sets R options:
  - `scipen` = `999` - prefer fixed notation over scientific
  - `future.globals.maxSize` = `8 * 1024^3` (~8 GiB)
  - `dplyr.summarise.inform` = `FALSE` - suppress summarise messages
- Sets the global RNG seed via `set.seed(seed)`.

Value

A named list with:

wd List of working directory paths (fastscratch + subfolders).

year_beg The starting year.

year_end The ending year.

Examples

```
env <- setup_environment(year_beg = 2015, year_end = 2024, seed = 42)
env$wd$dir_sim
env$year_beg
```

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