

Project LaTeX Explainer and Navigational Guide

Documentation Index for the Shaikh & Tonak Replication

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Abstract

This guide explains where to find every major piece of information in the project: methodology, code, data, generated reports, and build instructions. Use it as a map to quickly locate what you need.

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1 Project Structure Overview

Path	Purpose
Technical/data/	All data sources: extracted book tables, unified historical database, and modern extension data.
Technical/data/historical/book-tables/	Book tables (replication targets), curated CSVs for Table 5.x.
Technical/data/unified-database/	Unified database (CSV/XLSX) with metadata/logs.
Technical/src/	All code (extraction, analysis, replication, validation, extension).
Technical/src/analysis/replication/	Replication to produce Table 5.4 and related results.
Technical/src/analysis/validation/	Validation tools comparing sources and checking accuracy.
Technical/docs/methodology/	Copy methodology in LaTeX (complete technical description).
Technical/docs/latex/	Focused LaTeX documents: code explainer, validation, this explainer, and bird’s-eye view.
Technical/docs/reports/	Generated reports and summaries.
.github/workflows/	CI configuration for building PDFs (artifacts uploaded on push/PR).

2 Data Inventory (Paths)

Location	Contents
Technical/data/historical/book-tables/	Extracted book tables (many ‘table.pXX_*.csv’), curated ‘table.5.4*.csv’.
Technical/data/historical/processed/	Replication products (e.g., ‘table.5.4_perfect_replication.csv’, ‘marxian_variables_calculated.csv’).
Technical/data/unified-database/	Unified database CSV/XLSX plus ‘database_metadata.json’, creation logs and summaries.
Technical/data/modern/integrated/	‘complete_st_timeseries.1958-2025.csv’ and integration metadata.
Technical/data/modern/final_results/	Final series CSVs (1958–1989, 1958–2025) + metadata.
Technical/data/modern/final_results/academically_solid/	Academically solid series and validation JSON.
Technical/data/modern/final_results/LEWISlinks/	LEWIS links, red variants and validation.
Technical/data/source_pdfs/keyPDFs/	Source publications (NIPA, BLS, BEA, etc.).

3 Key LaTeX Documents and What They Contain

Document	Contents
Technical/docs/methodology/SHAIKH.TONAKI.METHODLOGY.tex	Global definitions, variable definitions, data sources, formulas, validation metrics, quality checks.
Technical/docs/latex/SHAIKH.TONAKI.METHODLOGY.WITH.CODES.tex	Implementation notes and code-oriented details.
Technical/docs/latex/SHAIKH.TONAKI.BOOK.CODES.EXPLAINER.tex	LaTeX formulas, and Python listings outside tables for clarity.
Technical/docs/latex/SHAIKH.TONAKI.VALIDATION.REPORT.tex	Validation; compiles even if plots are missing.
Technical/docs/latex/PROJECT.LATEX.EXPLAINER.tex	Index and guide to all project resources.
Technical/docs/latex/PROJECT.BIRDS.EYE.VIEW.tex	Replication story, comparisons, updates, implementation reasoning, and charts.

4 Where to Find Data

- **Book Tables:** data/extracted_tables/book_tables/
- **Unified Historical DB:** data/unified_database/
- **Modern Extension Inputs:** data/modern/
- **Source PDFs:** data/source_pdfs/

5 Where to Find Code

- **Replication:** src/analysis/replication/
- **Validation:** src/analysis/validation/
- **Extraction:** src/extraction/
- **Core Utilities:** src/core/
- **Extension:** src/extension/

6 How to Build the LaTeX Documents

Build Commands

Use the project script in Technical/scripts/ (requires latexmk):

```
./Technical/scripts/build-latex.sh          # defaults to Output/pdfs
./Technical/scripts/build-latex.sh --outdir Output/pdfs
```

Builds all .tex in Technical/docs/latex/ and Technical/docs/methodology/ (outputs under Output/pdfs).

Continuous Integration builds PDFs automatically on push/PR via `.github/workflows/latex.yml` and uploads them as artifacts.

7 Quick Links (Paths)

- Methodology: [docs/methodology/SHAIKH_TONAK_METHODODOLOGY.tex](#)
- Code Explainer: [docs/latex/SHAIKH_TONAK_CODE_EXPLAINER.tex](#)
- Validation Report: [docs/latex/SHAIKH_TONAK_VALIDATION_REPORT.tex](#)
- Bird's-Eye View: [docs/latex/PROJECT_BIRDS_EYE_VIEW.tex](#)

8 Troubleshooting

Common Issues

- Missing images: documents are robust to missing plots and will compile without them.
- Package availability: `latexmk` and common LaTeX packages are required; CI installs TeX Live groups that satisfy them.
- Clean build: run `latexmk -C` in the output directory for a fresh build.