

R Markdown - PDF & Word Output

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11 November, 2020

Anatomy of Rmd

This is an R Markdown document which can be rendered as a PDF or Word doc. R Markdown documents are files that end in `.Rmd` and include a few different parts:

The YAML header

The YAML header is the section at the very top of our file between the `---` symbols. This text doesn't show up directly in our output, but it tells R Markdown how to render our document.

We can specify multiple output formats in our YAML header, like `html_document`, `pdf_document`, and `word_document`. We can also specify settings for these output formats, to do things like add a floating table of contents. And we can add things like a title, author, and date which may be automatically rendered depending on our output format.

Code chunks

The most important part of our R Markdown document - our code! - lives in “chunks” throughout our document. These are the sections that start and end with three tick marks (````) and have a dark gray background in RStudio.

The first line of a code chunk also includes information in curly braces about the code and how its output should be displayed:

- The first and always required item is the language the code is in, e.g. `{r}` or `{python}`
- After the language comes an optional chunk label, e.g. `{r setup}`
- Finally and separated by a comma come any chunk options. These control the output of our code. A few useful ones include:
 - `eval`: whether to run the code
 - `echo`: whether to print the code (or just the output)
 - `warning`, `message`, `error`: whether to print any warnings, messages, or errors generated by our code
 - many more

Markdown

Markdown is how we do all of our other formatting. It was written in 2004 by Jon Gruber and Aaron Swartz¹ as a way to turn plain text into rich formatted HTML. Markdown syntax is easy to learn, and elements of Markdown are supported in many places (Reddit, Slack, discussion boards).

¹<http://www.aaronsw.com/weblog/001189>

As you can see throughout this document, you can do a lot of things with Markdown, including:

- *Italicize* text by surrounding it with single underscores (`_text_`) or asterisks (`*text*`)
- **Bold** text by surrounding it with double asterisks (`**text**`)
- Insert links with `[some text](https://www.rstudio.com/)`
- Render text as inline code with single tick marks

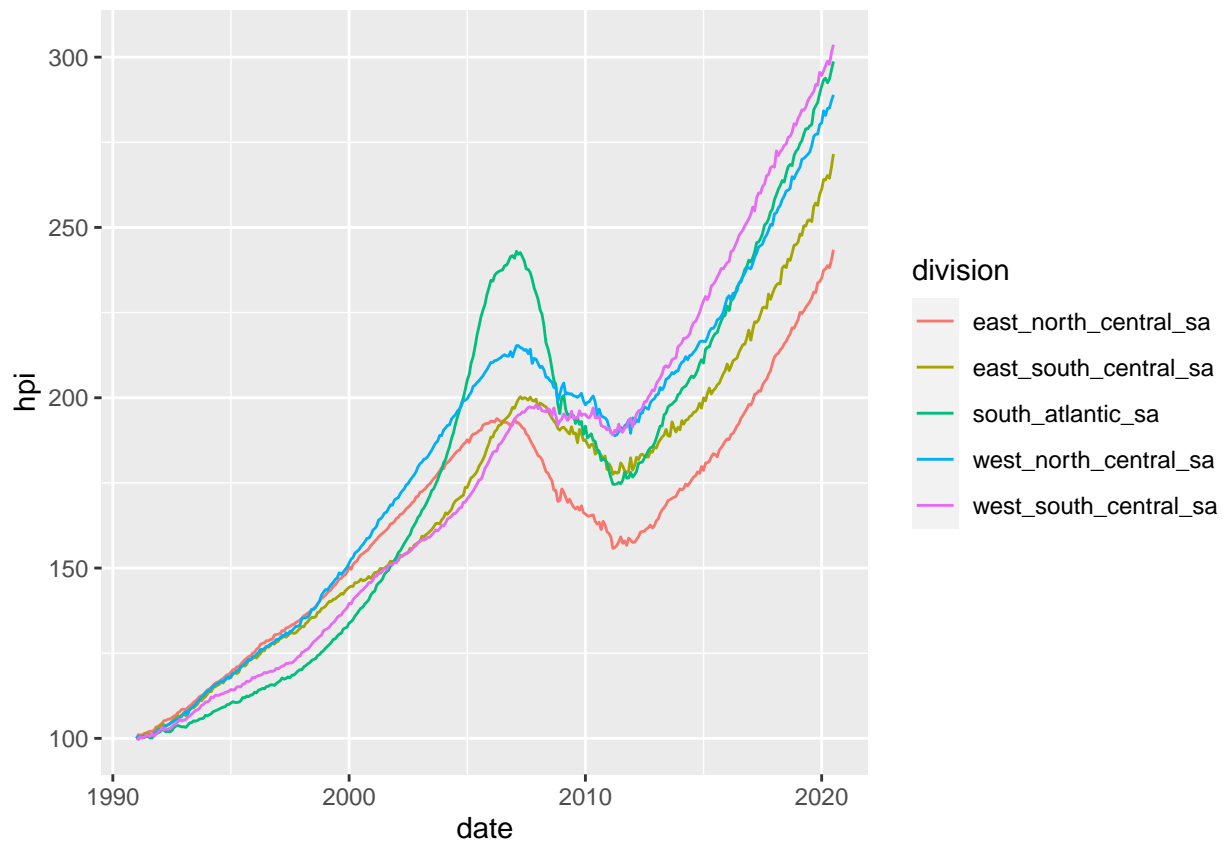
* Render text as code blocks with triple tick marks

- Create section headings with `#` (and subheadings with `##`, `###`, `####`, ...)
- Create ordered lists with `1.`, `2.`, `3.`, ... and unordered lists with `*`, `-`, or `+`
- Create footnotes with `^[]2`
- Create math equations with LaTeX syntax: $f(k) = \binom{n}{k} p^k (1-p)^{n-k}$

We can even run code inline with single tick marks like this: The sum of 2 and 2 is 4.

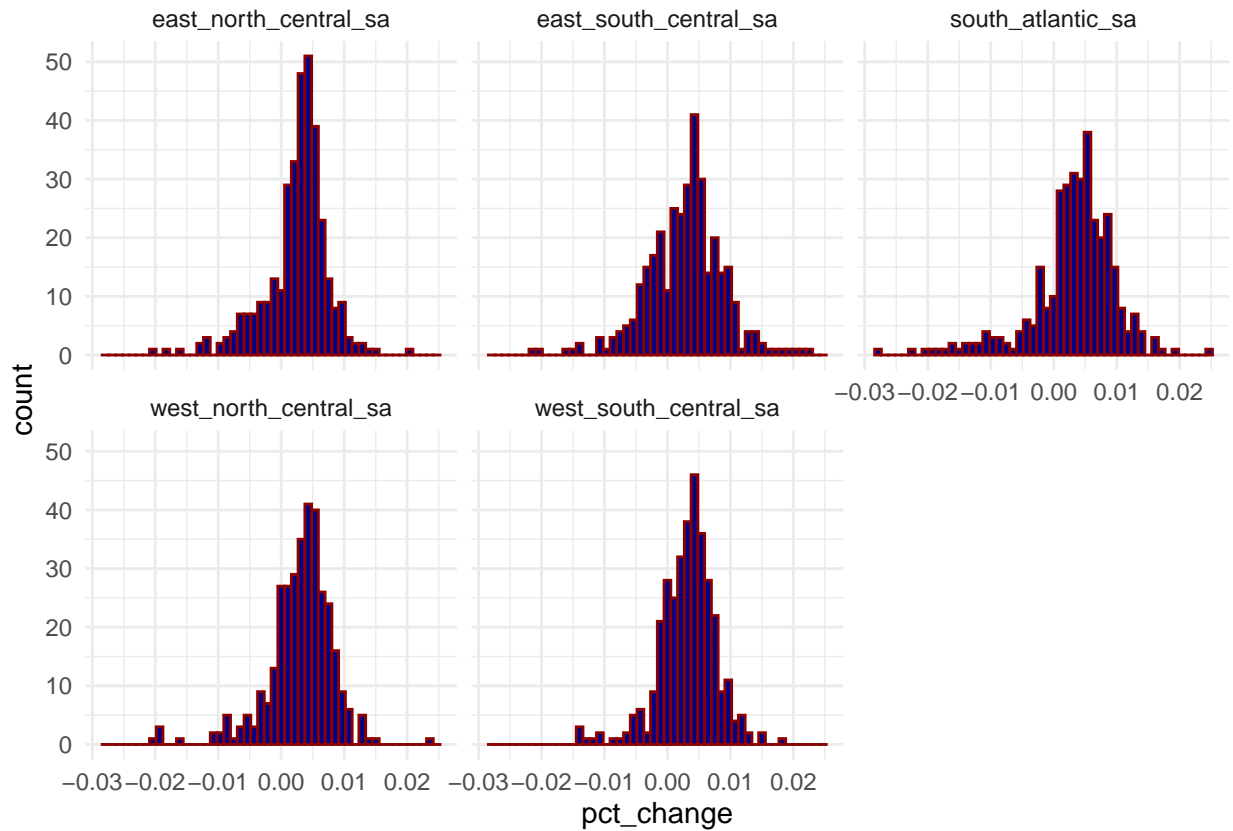
House Price Index

HPI over time



²this is a footnote

Distributions of monthly changes



Analysis details

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