

Introduction to alfred

Onno Kleen

2017-06-06

A quick introduction for downloading FRED and ALFRED data.

Installation

Right now, the devtools package is needed until I submitted the package to CRAN

```
install.packages("devtools")
devtools::install_github("onnokleen/alfred")
```

Usage

Downloading data is straightforward (for real-time data from ALFRED see below):

```
library(alfred)
df <- get_fred_series("INDPRO", "indpro")
```

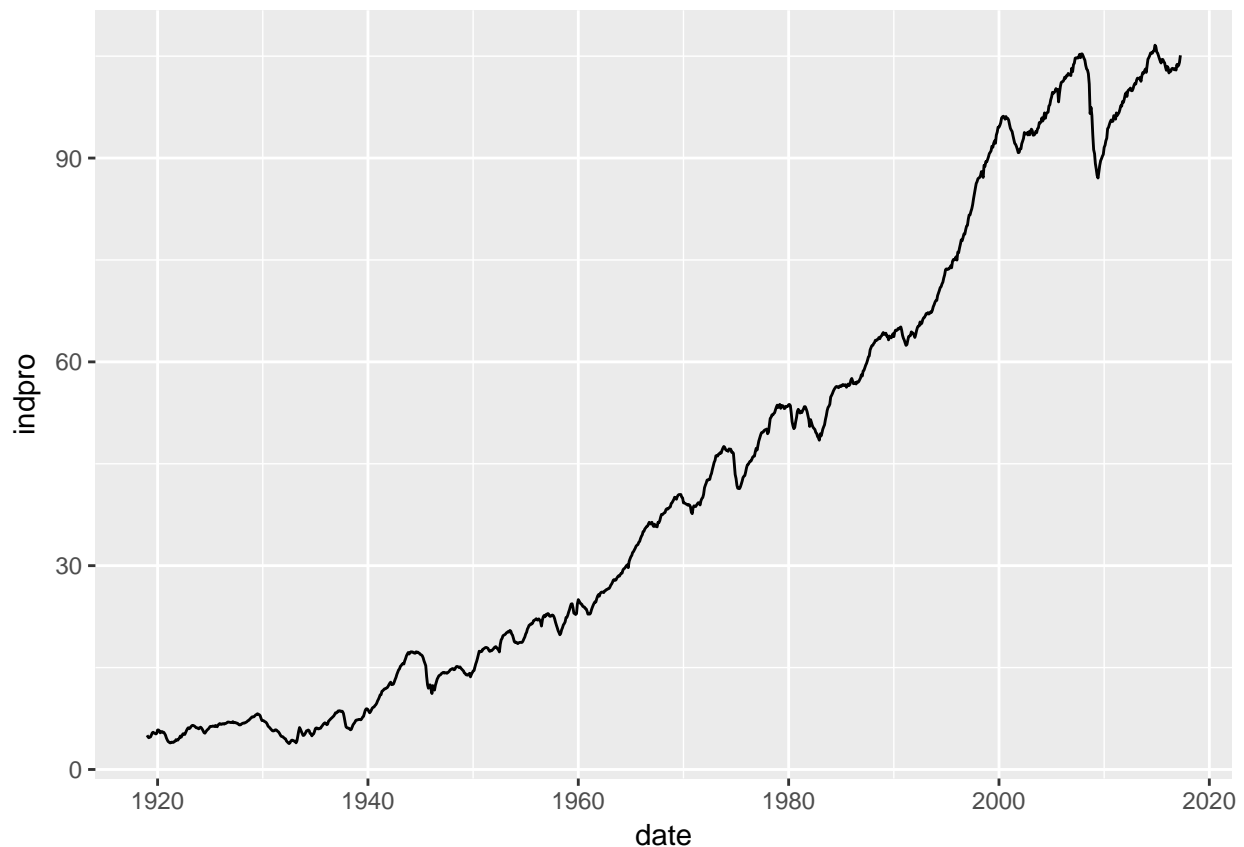
The output is a data frame

```
df

## # A tibble: 1,180 x 2
##       date indpro
##       <date> <dbl>
##  1 1919-01-01 5.0346
##  2 1919-02-01 4.8121
##  3 1919-03-01 4.6730
##  4 1919-04-01 4.7565
##  5 1919-05-01 4.7843
##  6 1919-06-01 5.0902
##  7 1919-07-01 5.3962
##  8 1919-08-01 5.4797
##  9 1919-09-01 5.3684
## 10 1919-10-01 5.3128
## # ... with 1,170 more rows
```

This can be readily used, i.e. for plotting

```
library(ggplot2)
ggplot(df) +
  geom_line(aes(x = date, y = indpro))
```



Vintage data

When using `get_alfred_series` for downloading real-time data sets, there will be an additional column for the respective vintage dates.

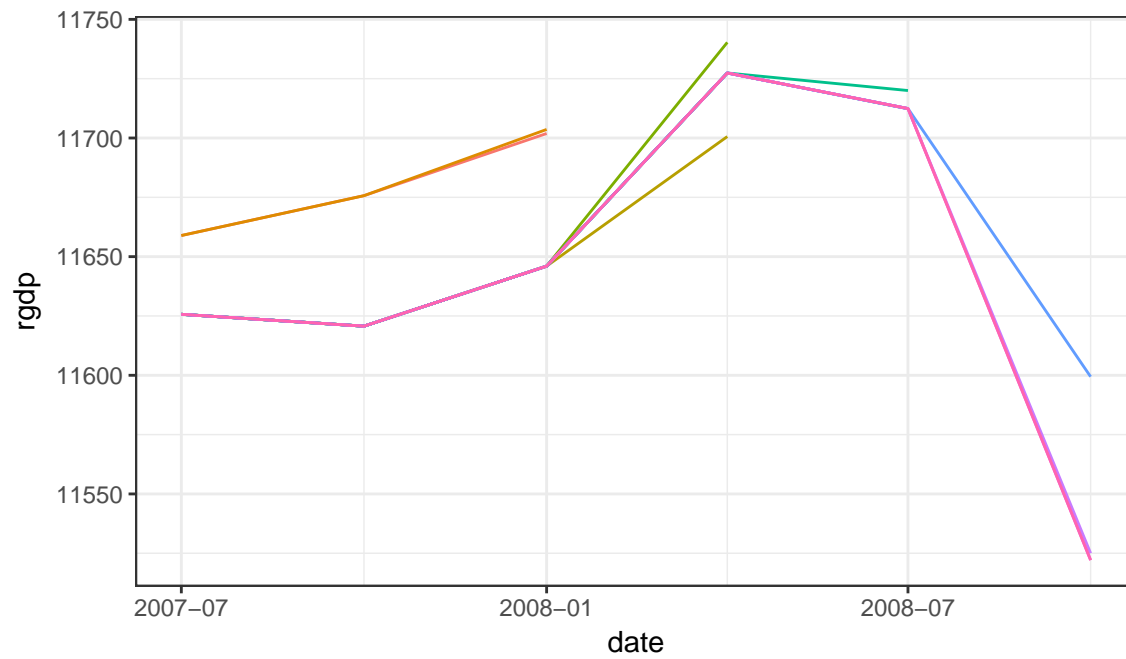
```
df_vintages <-
  get_alfred_series("GDPC1", "rgdp",
                    observation_start = "2007-05-31",
                    real_time_start = "2008-05-31", real_time_end = "2009-03-30")
df_vintages
```

```
## # A tibble: 57 x 3
##       date realtime_period  rgdp
##       <date>         <date>  <dbl>
## 1 2007-07-01   2008-05-31 11658.9
## 2 2007-10-01   2008-05-31 11675.7
## 3 2008-01-01   2008-05-31 11701.9
## 4 2007-07-01   2008-06-26 11658.9
## 5 2007-10-01   2008-06-26 11675.7
## 6 2008-01-01   2008-06-26 11703.6
## 7 2007-07-01   2008-07-31 11625.7
## 8 2007-10-01   2008-07-31 11620.7
## 9 2008-01-01   2008-07-31 11646.0
## 10 2008-04-01  2008-07-31 11700.6
## # ... with 47 more rows
```

Because of its output being a tidy data frame, it is easy to visualise revisions by

```
library(ggplot2)
```

```
ggplot(df_vintages) +  
  geom_line(aes(x = date, y = rgdp, colour = as.factor(realtime_period))) +  
  theme_bw() +  
  theme(  
    legend.title = element_blank(),  
    legend.position = "bottom"  
  )
```



2008-05-31 2008-08-28 2008-11-25 2009-02-27
 2008-06-26 2008-09-26 2008-12-23 2009-03-26
 2008-07-31 2008-10-30 2009-01-30 2009-03-30